Member Associated Business Papers, Inc.

The Newspaper of the Industry

Member Audit Bureau of Circulations.

AIR CONDITIONING AND REFRIGERATION News

Issued Every Monday at 5229 Cass Ave., Detroit 2, Mich.

OCT. 22, 1945

Vol. 46, No. 8, Serial No. 886.

Established 1926.

Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trade Mark Registered U. S. Patent Office. Copyright, 1945, by Business News Publishing Co.

Inside Dope

By George F. Taubeneck

Saturday Evening Post and Baron Luigi Parilli
That Mighty Atom
Began In Russia
No Monopoly
Peace or Death
Atomic Bomb Doesn't Justify 'Maginot Mentality'

Saturday Evening Post And Baron Luigi Parilli

In two recent issues of *The Saturday Evening Post*—which, for our money, has reached an all-time peak of interest recently—Forrest Davis reports on the "Secret History of a Surrender."

It has to do with the fascinating behind-the-scenes diplomacy which led to the capitulation of the Axis armies in Italy.

One mysterious and invaluable go-between figure in those cloak-and-dagger dickerings was one Baron Luigi Parilli, a man identified as having sold American automobiles in Europe.

Baron Parilli did more than that. He was Kelvinator's representative in France and Belgium for many, many years.

Shortly before the war the writer was entertained in Baron Parilli's fantastic apartment in Paris (boys, you've never seen anything like it in Chicago, Milwaukee, or St. Paul!).

He is one of the most amazing characters we've ever met, and it's easy to imagine how effective he must have been on his delicate, ticklish, sealed-beam operations.

That Mighty Atom

Now that we look back upon it, atomic power wasn't so remarkable.

For decades scientists have apparently known quite a bit about it.

Yet they were like the gorgeous-but-inexperienced girl on a picnic with an eligible male. The can of sardines was there, but where in tunket was the key?

Everyone today is speculating on what the future of atomic power will be, now that it has been revealed that the atmoic bomb is a reality—a potent weapon in our hands which we all hope will end war among nations.

From what has been said of the potency of this weapon, total annihilation seems to be no exaggeration of the consequences of a war in which both contestants started with a good supply of these bombs.

It is evident that at present nothing more is to be told of the technical details beyond the sketchy accounts we have been given of the magnitude of the project, of the general nature of the first test in New Mexico, and of the enormous potency of the new weapon. But we all must consider, in sober earnestness, some of the implications of the existence of this weapon.

Began In Russia

It represents a culmination of researches in atomic structure which have been carried on throughout the world during the past 50 years.

It is important for us to realize the international character of these studies. More than 50 years ago the foundations of modern atomic science were laid in the discovery of the periodic system of the elements by Mendeleef (a Russian)—and Russian scientists in large numbers have distinguished themselves in this field ever since.

In the nineties the foundations of electronic science were initiated in England through the studies of J. J. Thomson and, a decade later, by Ernest Rutherford, a New Zealander who pioneered in understanding the fundamental nature of radium

(Concluded on Page 13, Column 1)

Hotpoint to List All Appliances At Uniform Price

CHICAGO — Hotpoint appliances will have one retail price nationally, it was announced last week by Edison General Electric Appliance Co.

The appliances covered by this policy include refrigerators, ranges, water heaters, home freezers, washers, ironers, dryers, dishwashers, and garbage disposals.

A short time ago Edison G-E announced that its electric ranges and water heaters would sell at 1942 prices.

Advertisements are now being prepared which will feature appliances and a "delivered price" to the consumer anywhere in the nation, it is reported.

Crosley Limits Line To 2 7-ft. Models

CINCINNATI—Two 7-cu. ft. household refrigerators—a standard and a deluxe—are the first 1945 models off the lines of Crosley Corp.'s Richmond, Ind., plant and they should be on the market soon, announces R. C. Cosgrove, vice president and general manager.

Both models have the Shelvador feature and are equipped with oversized freezers to allow for frozen foods, said Lee Stratton, Crosley manager of refrigeration sales.

In order to make as many units as possible available to housewives at the earliest moment, initial production has been limited to these two models, added Mr. Stratton.

(Concluded on Page 4, Column 4)

Freezer Mfrs. Planning 4 Meetings Annually

CHICAGO — The Farm & Home Freezer Manufacturers Association at its recent meeting here named committees to lay out a program for future meetings, and to take up other pertinent affairs, it is reported by E. G. Vail, executive secretary of the group.

Annual meeting of the Association is scheduled for the latter part of February and will be held in Chicago. There will probably be four meetings yearly, three of which will be held in Chicago and one in New York City.

The group discussed proposed standards of construction and performance of home freezers which had been presented by a previously ap-

(Concluded on Page 4, Column 5)

WLB Rules Out Wage Boost for 'Steam Fitters'

CINCINNATI — Refrigeration contractors here have won another and perhaps the final round in their wage dispute with the steam fitters union.

The regional War Labor Board has ordered the union to sign a contract providing wages at the rate which prevailed last year, instead of the union-proposed contract which would have given refrigeration repairmen the steam fitters' rate of $1.72½ an hour for all service work.

While the union still has the right to appeal this decision of the regional board to the national WLB, contractors here say that WLB in Washington has rarely, if ever, reversed the decision when both the local and

(Concluded on Page 36, Column 2)

St. Louis Firms Hire Vets; Strike Continues

ST. LOUIS—Although the strike of union refrigeration repairmen continues here, several contractors which formerly employed union labor have changed over to "open shops," it has been learned by the NEWS.

After spending considerable time trying to work out the problem with the union, which went on strike Aug. 6 demanding pipfitters rates of $1.75 for all service and installation work, some half dozen contractors hired war veterans and trained

(Concluded on Page 36, Column 1)

Washer Parts Jobbers Plan Discussion on Servicing

CHICAGO — Appliance Parts Jobbers Association, Inc., will hold its Fall meeting Oct. 25 through Oct. 27 at the Morrison hotel here.

Much interest is centered in the session on Saturday afternoon, Oct. 27, in which there will be an informal debate on the subject "Should the washer parts jobber do retail service work?" Manufacturers' representatives will act as judges of the debate. There will be luncheons for all members and guests on Oct. 26 and Oct. 27.

Members will also probably hear of further plans in the campaign to "sell" the washer manufacturers on providing the independent appliance parts jobber with a complete line of original parts. The jobbers' argument is that they can provide "one stop" distributon of parts, and thus help servicing dealers to operate more efficiently.

Uniform National Price to Cover G-E Appliances

BRIDGEPORT, Conn. — Prices on all electrical appliances marketed by General Electric Co. will be the same in all parts of the country, under a policy announced by C. R. Pritchard, general sales manager of the G-E appliance and merchandise department.

This move is an extension of the company's prewar policy of nationally uniform prices for small appliances such as irons, fans, roasters, and toasters. Now the one-price rule will apply on refrigerators, home freezers, ranges, water heaters, dryers, ironers, dishwashers, and garbage disposals.

"This policy had tremendous public acceptance," declared Mr. Pritchard. "Consumers everywhere knew the prices of G-E small appliances because they were nationally advertised

(Concluded on Page 33, Column 5)

First Westinghouse Is 7-ft. Model

MANSFIELD, Ohio—The first of the new 1946 Westinghouse refrigerators—a 7-cu. ft. capacity model completely redesigned and reengineered—were on their way to distributors throughout the United States, it was reported last week by G. H. Meilinger, manager of the household refrigeration department of the Westinghouse Electric Appliance Division.

Shipments started simultaneously with production, Mr. Meilinger said, and the first carloads were sent to the West Coast under a distribution plan which will permit showing of the new refrigerators throughout the country at approximately the same time.

"In addition to the new refrigerator, known as the B-7, similarly improved models will follow at a later date," he added.

"The restyled refrigerator will bring new conveniences to the consumer such as improved shelf arrangements, increased milk and bev-

(Concluded on Page 33, Column 2)

Rema to Study Pricing, Sales At Fall Meeting

Plans for Industry Show Will Be Discussed At Hot Springs

PITTSBURGH—OPA pricing policy, sales and promotion problems that are facing reconverting manufacturers, and the various activities of the association itself will be the principal program topics at the Fall meeting of Refrigeration Equipment Manufacturers Association, which will be held Nov. 7 to 9 at The Homestead, Hot Springs, Va.

The meeting will open Wednesday morning, Nov. 7, with a series of product section meetings, in which the following product groups of Rema will meet separately: temperature controls, flow control valves, valves and flare fittings, water coolers, refrigerants lubricating oils and chemicals; low temperature cabinets cases and coolers; general product group; heat transfer equipment; highside equipment; tubing and sweat fittings.

On Thursday morning, at a meeting to be attended by Rema members, Fred Schwarz, Chief, Mechanical Building Equipment Section, Building Materials Price Branch, OPA,

(Concluded on Page 33, Column 3)

Investment Firm Purchases Baker

OMAHA, Neb. — Arrangements have been completed under which two companies in the Equity Group of investment companies have purchased for an undisclosed amount, control of the Baker Ice Machine Co. of Omaha, and its subsidiary, Northwest Baker Ice Machine Co. of Seattle, from the Baker family and associated interests.

R. L. Baker, former president of the company; his brother, C. A. Baker of Glen Ridge, N. J., and their brother-in-law, H. G. Kelly, of Omaha,

(Concluded on Page 4, Column 1)

The New Transportation for Salesmen

Brass & Copper Sales Co., St. Louis parts jobber, finds its civilian jeep arouses a lot of interest. Here Charles Wunderlich, in charge of the firm's refrigeration supplies division, pauses as his guest takes the wheel. All the customers want a ride, he reports.

'Let's Have an Ever-Normal Refrigerator' Urges the Saturday Evening Post

What this country needs is not an ever-normal granary, but an "ever-normal refrigerator."

That's what the *Saturday Evening Post* declares in an editorial in its Oct. 13 issue. Said the *Post:*

"It is probably not in the best taste to raise the issue, but which would you rather have: a steak or a bowl of oatmeal, corn-meal mush, or a brace of pork chops? So would everybody else, and the curious thing is that in general a meat diet is better for you.

"Contemplating this nutritional fact, H. E. Babcock, who is a Cornell trustee, agricultural expert, and practicing farmer, all in one piece, has hit on the bright idea that what we need for the future is not an 'ever-normal granary' but an 'ever-normal refrigerator.'"

The Saturday Evening Post editorial then quotes the following statement by Mr. Babcock:

"No one ever bought a refrigerator to store oatmeal. But when oats are converted into fresh milk, or corn is converted into pork, a home refrigerator becomes a necessity. Then millions of small farms producing a high-grade animal-product diet for the American people will stimulate a tremendous amount of business activity: financing, processing, storage and preserving, packaging and distribution.

"Some people assert that this health-making and business-stimulating agricultural program cannot be sustained because the people lack the purchasing power to buy a top-notch diet. This is putting the cart before the horse. I say we cannot afford not to make the best diet available.

The 'ever-normal granary' idea is a proposal to lock up grain in dead storage, discourage its conversion into the more nourishing animal foods and hamper the activity of scores of industries from chicken raising to meat packing. The effect on business, farming, distribution, and health of the American people is deadening.

"But suppose we substitute for acreage control and the negative burying of cereal surplus in grain elevators the more realistic policy of providing a better diet for everyone. Then we find ourselves transforming farm produce into the most beneficial form of food and using storage space, not for the raw material but for the finished food itself.

With the development of the quick freezer, industrial farm and home, we can deal with any possible surplus of food in its best dietary form: frozen meat, vegetables, and fruit. What's the matter with an 'ever-normal refrigerator?'"

Moloney, White Join Detroit Frigidaire

DETROIT—Appointment of J. H. Moloney as general sales manager and C. I. White as appliance sales manager of the Detroit branch of Frigidaire Division, General Motors Corp., has been announced by R. F. Callaway, branch manager.

Both men are former Frigidaire employes. During the war Mr. Moloney was advertising and promotion manager of G. M.'s Detroit Diesel Engine Division, while Mr. White was associated first with the Detroit Ordnance District and later with the Parker Appliance Co. as Detroit district manager.

Mr. Moloney originally joined Frigidaire in 1926, pioneering in the early application of apartment house and commercial equipment. From 1935 to 1942 he was manager of retail and wholesale operations on commercial and air conditioning equipment in the Detroit branch.

Mr. White had been with Frigidaire 19 years in selling, supervision, and sales management in both the retail and wholesale appliance field.

H. E. Ferrill Returns To Kerotest Post

PITTSBURGH — After four and one-half years in the armed forces, H. E. Ferrill has returned to Kerotest Mfg. Co. here, as sales and development engineer of the Brass Division, according to an announcement by George R. Allen, general sales manager of the Kerotest Brass Division.

Rodger Heads Utility Sales For Bendix Appliances

SOUTH BEND, Ind.—M. R. Rodger has been appointed utility sales manager of Bendix Home Appliances, Inc., here, according to W. F. Linville, sales manager.

Mr. Rodger has a background of 25 years in the public utility field, the past eight years of which have been spent as customer service and sales manager for the Middle West Service Co., with headquarters in Chicago. Prior to that he was commercial manager for the Central Illinois Public Service Co., Springfield, Ill.

CP Gas Range Mfrs. Elect Carl Sorby Chairman

NEW YORK CITY—E. Carl Sorby, vice president of Geo. D. Roper Corp., has been elected chairman of the "CP" group of gas range manufacturers of the Association of Gas Appliance & Equipment Manufacturers, H. Leigh Whitelaw, managing director of the association, announced.

A. B. Ritzenthaler, vice president of the Tappan Stove Co., was elected vice chairman of the group.

Elected to the "CP" executive committee were—Lloyd C. Ginn, American Stove Co.; Henry Honer, Western Stove Co.; R. S. Agee, Roberts & Mander Stove Co.; John C. Pankow, Detroit-Michigan Stove Co.; John E. Bogan, Cribben & Sexton Co.; H. C. Erhard, Standard Gas Equipment Corp.; R. B. Hurt, Hardwick Stove Co.; and D. C. Ferguson, Clare Bros. & Co., Ltd.

B. Altman, N. Y. Store, Expands Appliances

NEW YORK CITY — Opening of the new major appliance department at B. Altman & Co. here recently was preceded by the unveiling of the *Better Homes & Gardens* model kitchen on the fourth floor.

Utilizing 100% more floor space than before the war, the department will feature two other model kitchens, a model laundry, cleaning shop, and sewing shop.

An advertising campaign publicizing the theme "Altman's Will major in Household Appliances" brought many inquiries from the public. A "priority register" booth was set up so that customers could sign up for the appliances they want, orders to be filled on a priority basis.

Appliance preferences have been evenly divided all the way from washers and refrigerators to smaller appliances, according to the store officials.

Iceberg Locker Names Mitchell Sales Mgr.

NEW YORK CITY — Sam C. Mitchell, formerly western sales manager for Crosley Corp., has been appointed general sales manager of Iceberg Refrigerated Locker Systems, Inc., with headquarters in the Empire State Bldg. here, announced Ross R. Smith, president.

Mr. Mitchell has also been director of sales promotion and advertising of Kelvinator and sales and promotion manager of Hamilton Radio Corp.

Home Service Workers Win McCall Awards

NEW YORK CITY — The Edison Electric Institute has announced the winners of the 1944 Laura McCall Awards, sponsored by *McCall's Magazine*, and given in public recognition of the outstanding contributions of electric light and power companies, through their home service departments, to the health and happiness of the American home.

First prize was awarded to Mr. H. H. Brenan, manager of residential sales department, Pennsylvania Power & Light Co., Allentown; second prize to Martha Marie Bohlsen, home service director, Nebraska Power Co., Omaha; third prize to Edith T. Rauch, home service director, Puget Sound Power & Light Co., Seattle; fourth prize to Routh T. Neill, home service director Kingsport Utilities, Inc., Kingsport, Tenn.; and fifth prize to Kathryn M. Holy, home service director, Florida Power Corp., St. Petersburg.

The board of judges for the Laura McCall Awards consisted of: Mr. C. E. Greenwood, commercial director, Edison Electric Institute; Dr. Helen Judy Bond, professor of home Economics, Teachers College, Columbia University; Mr. L. E. Moffatt, editor of *Electrical Merchandising*; Miss Clara Zillessen, advertising manager, Philadelphia Electric Co.; and Mr. Harry Restofski, sales manager, West Penn Power Co., Pittsburgh.

The prizes, an engraved plaque, four illuminated parchments, and a total of $400 in War Bonds and stamps, are awarded on the basis of reports of 2,000 words or less, submitted by the entrants and covering: (1) The home service department's activities to further electrical living through the use and care of electrical household equipment; (2) activities participating in the 1944 wartime program of food conservation and preservation; and (3) a summary of achievements.

This is the fifth year that the Laura McCall Awards have been given through the Edison Electric Institute.

Detrola Sells Machine Tool Plant to F. L. Jacobs

DETROIT — International Detrola Corp. has sold its Indianapolis, Ind. machine tool plant and equipment, President C. Russell Feldmann announced recently.

Production and servicing of Libby Turret Lathes has been transferred to the company's Elkhart, Ind. plant. The Indianapolis land and buildings were purchased by F. L. Jacobs Co., of Detroit.

Moves to Kelvinator

E. G. "RED" HAIGHT

* * *

'Red' Haight Joins Kelvinator Sales

DETROIT—Appointment of E. G. "Red" Haight as sales engineer, contract sales division, was announced by Edward R. Legg, assistant general sales manager, Kelvinator Division, Nash-Kelvinator Corp.

Mr. Haight, whose headquarters will be in Detroit, was formerly chief application engineer of the Universal Cooler Corp. He joined Universal in 1935 as assistant service manager and later became assistant sales manager.

After attending the University of Michigan, Mr. Haight entered the refrigeration business with Copeland Products Corp. in Detroit. He remained with Copeland until joining Universal, serving in various engineering capacities and as field service representative.

Farnsworth Sets Jan. 1 For Television Start

CINCINNATI—Lee Hadin, division manager of the Farnsworth Television & Radio Corp. disclosed recently in Cincinnati that television and FM receivers will be in production soon after Jan. 1.

Mr. Hadin and John Garceau, advertising and sales promotion manager, were principal speakers at a Cincinnati area dealers meeting of the York Supply Co., distributor in this sector.

Charles J. Heitz, York Supply executive, was host for a dinner following the meeting.

Preference

STANGARD Prime Surface* Cold Plates are now giving utmost service and satisfaction in thousands of refrigerating units. They will continue to give the best that money can buy because they represent the ultimate in refrigerating efficiency. That is why Stangard Prime Surface Cold Plates are *preferred* by the leading manufacturers of refrigerating equipment.

Whether for locker plants...display cases...food counters...soda fountains...trucks...liquid coolers...ice cream cabinets ...farm milk coolers...farm freeze cabinets...frosted food refrigerators...beverage coolers...rivet chillers...or low temperature test rooms...it pays to *specify Stangard Prime Surface Cold Plates!*

THE STANGARD-DICKERSON CORPORATION
46-76 Oliver Street, Newark 5, N. J.

*No intermediate factor between refrigerant and contact surface.

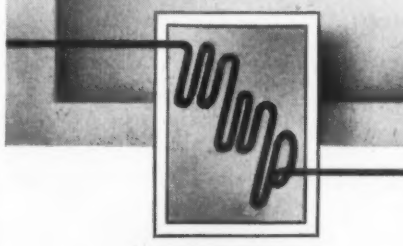
LITTLE "STAN," THE STANGARD MAN

STANGARD PRIME SURFACE COLD PLATES

Copyright 1945 by The Stangard-Dickerson Corporation

STANGARD KNOWS REFRIGERATION

THERE IS NOTHING LIKE STAINLESS STEEL TO WITHSTAND HIGH HUMIDITY. IT IS A "NATURAL" FOR REFRIGERATOR SHELVES



WALL WIRE PRODUCTS COMPANY

11333 GENERAL DRIVE
PLYMOUTH, MICHIGAN

Makers of STAINLESS STEEL AND RETINNED REFRIGERATOR SHELVES AND WELDED WIRE PRODUCTS

Exclusive . . . for Frigidaire Dealers: unique new Operating Guide that answers vital sales and management problems!

New and different, Frigidaire's Dealer Operating Guide (Sales and Management Section) pools the experience of thousands of Frigidaire dealers over many years of successful operation . . . in metropolitan centers, cities, and small towns . . . in every part of the country. Presents important information and helpful guidance based on this experience—in easy-to-use, quick-reference form. Covers the entire field of sales and management, as indicated by such typical chapter headings as—

Building a Successful Frigidaire Dealer Operation • Location, Store Planning and Display Fundamentals • Financial Management and Control • Sales Records and Product Inventory • Compensating Salesmen • Training Salesmen • Sales Stimulation • Advertising • Publicity • Appliance Prospecting and Selling Plans • Mass Demonstrations and Exhibits • The Rural Market

The Frigidaire Dealer Operating Guide (Sales and Management Section) is one more addition to a library of special Frigidaire dealer aids which already includes the Frigidaire Dealer Operating Guide (Service Section) and the Frigidaire—Raymond Loewy Store Planning Guide, "Design for Selling." And it's one more proof of the value of the Frigidaire franchise!

PROVED AIDS FOR FRIGIDAIRE DEALERS

Frigidaire Dealers know that Frigidaire Engineering Research will always bring them the right products to sell. They know that Frigidaire Marketing Research will continue to bring them the right selling plans and ideas. And now they know more than ever that they will have constant, day-to-day guidance on the right way to operate their business . . . with this unique new Frigidaire Dealer Operating Guide which shows them how to—

Do more of those things which have proved to be *sound.*
Do less of those things which have proved to be *unsound.*

BACK THE VICTORY LOAN!

Look to Frigidaire for Leadership through DEALER AIDS!

For Excellence in War Production

FRIGIDAIRE
Division of
GENERAL MOTORS

DAYTON 1, OHIO • LEASIDE 12, ONTARIO

REFRIGERATORS • RANGES • WATER HEATERS
HOME FREEZERS • ICE CREAM CABINETS
COMMERCIAL REFRIGERATION • AIR CONDITIONERS
BEVERAGE, MILK, AND WATER COOLERS

Baker Control--[illegible]

(Concluded from Page 1, Column 5)

are retiring from the active management of the company.

Name and present personnel of the Baker Ice Machine Co. are expected to be retained by the new owners, who are planning to strengthen the company further with ample financing for expansion, research, and sales promotion.

William B. Winslow has been named by the Equity Group to direct the activities of the Baker company. Mr. Winslow has had experience in the refrigeration field dating back some time ago, but has not been active in the field in the last several years.

Baker refrigeration installations are in service in packing plants, theaters, hotels, educational institutions, industrial plants, stores, and other commercial establishments in every state of the union and in 63 foreign countries.

Suppliers to the Industry for more than 25 years

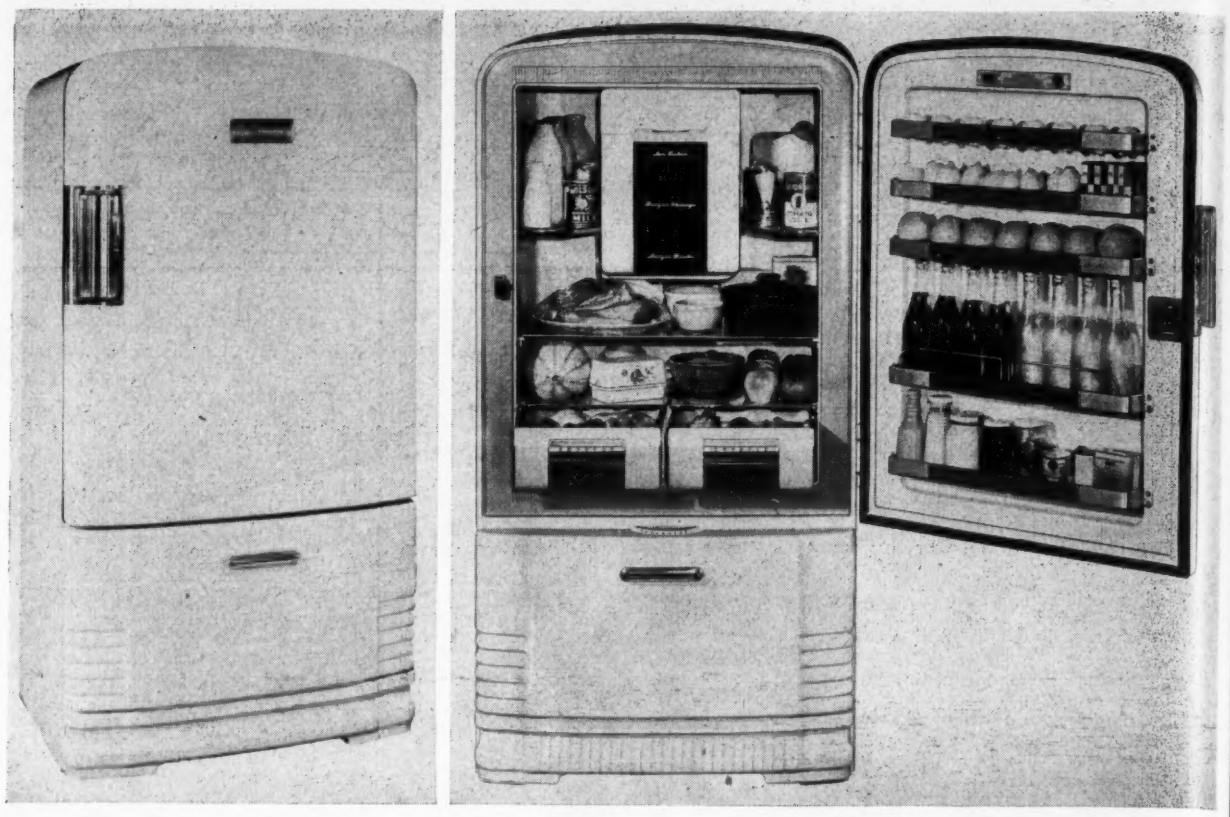
ACME PRODUCTS

Freon Condensers • Oil Separators • Liquid Receivers • Heat Exchangers • Pipe Coils Forced Convection Units • Hi-Peak Water Coolers Flooded Water Coolers • Ammonia Condensers Dry-Ex Water Coolers • Evaporative Condensers.

Write for catalog on any item

ACME INDUSTRIES
Jackson, Michigan

Crosley Restyles Refrigerators for 1945 Production



Above are exterior and interior views of the new deluxe 1945 Crosley 7 cu. ft. refrigerator now being produced at the Richmond, Ind., plant in addition to a standard model. Both models have over-size freezer compartments for frozen food storage. Note the new door latch, a feature of the deluxe model only.

Crosley Line--

(Concluded from Page 1, Column 2)

The deluxe model, SE-746, is equipped with a new "pull-tight" positive-seal" door latch with a plastic and chrome handle which is claimed to seal the door automatically with a "feather-light" touch.

With a storage capacity of 7.3 cu. ft., total shelf area is 13.81 sq. ft. (Nema rating). There are five aluminum shelves in the door. Dimensions of both deluxe and standard models are 60½ in. high, 30¾ in. wide, and 20½ in. deep. Cabinets are Bonderized and finished in white Dulux.

Features of the deluxe model include an ice capacity of 12 pounds; 112 ice cubes at one freezing; one "shucker-type" tray, one "pop-out" tray, and three regular trays.

Deluxe porcelain meat chest holds 10 to 14 pounds. There are also two sliding vegetable crispers covered by removable glass shelves. The deluxe model is also equipped with a storage bin which tilts forward for storing of dry vegetables, beverages, and canned goods which do not require refrigeration.

The standard model, SS-746, has an ice capacity of 8 pounds with 77 ice cubes at one freezing. It is fitted with four trays. This model is equipped with a large glass meat storage chest.

Freezer Mfrs.--

(Concluded from Page 1, Column 2)

pointed committee. A number o suggestions were made for additions and alterations, so that it was decided to review these suggestions and possibly include them in the final draft.

The Committee on Standards is composed of the following:

F. J. Bommer, Jr., Sanitary Refrigerator Co.; J. K. Noel, Jr., Victor Products Co.; H. J. Steinhorst, Emil Steinhorst & Sons; R. H. Bishop, R. H. Bishop & Co.

Another committee was appointed to study the matter of drawing up a code of proposed trade practices which after approval by the membership, would be submitted to the Federal Trade Commission.

Trade shows in which the membership might profitably participate will be recommended by a committee consisting of J. W. Krall, Tyler Fixture Corp.; A. H. Rose, Portable Elevator Mfg. Co.; and H. J. Hedrick, Mill Industries, Inc.

A commitee to survey new manufacturers entering the field, with a view to inviting them to become members of the Farm & Home Freezer Manufacturers Association was appointed and consists of R. H. Bishop, R. H. Bishop & Co.; G. E. Graff, Ranco Co.; and A. F. Sawyer, Dole Refrigerating Co.

Figure on making those shelves of Alcoa Aluminum

No doubt about aluminum's ability to do a good job here. Aluminum shelves went into thousands of household refrigerators before the war.

Aluminum gives you a lightweight shelf, easy to handle in cleaning, but sturdy and strong. It can be given the attractive, durable Alumilite finish (process patented); good looking on the sales floor, and it stays that way. No staining to cause complaints after refrigerators get into service.

Standardize on Alcoa Aluminum for your shelves, and be ready to swing into quantity production as releases for civilian products permit. ALUMINUM COMPANY OF AMERICA, 1975 Gulf Building, Pittsburgh 19, Pennsylvania.

ALCOA FIRST IN ALUMINUM

WHEN YOU NEED PRECISION-BUILT SMALL PUMPS . . . Specify TUTHILL

For Pressure Lubrication Build This Automatic Reversing Pump Into Your Equipment

From Tuthill, you can get stripped pumps to build pressure lubrication directly into the design of your equipment. Model CRS, illustrated, is a stripped automatic reversing pump which delivers from the same port regardless of direction of shaft rotation. It's the answer for lubricating reversing machinery or machinery of which the ultimate rotation is not known at time of shipment. Sizes from 1 to 50 g.p.m. Pressures up to 100 p.s.i. Write for Model S bulletin.

TUTHILL PUMP COMPANY
939 East 95th Street • Chicago 19, Illinois

New NORGE RO-TA-TOR WASHER

READY SOON!

Packed full of features, styled in tune with the times, built for years of usefulness, and priced for easy sale to a ready market—that's the Norge 1946 Ro-ta-tor washer. Note some of its *buyable* differences:

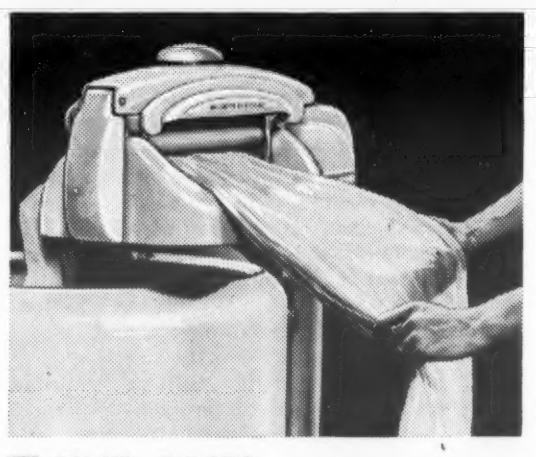
TRIPLE-WASHING ACTION
EXTRA-SIZE, PORCELAIN-ENAMELED TUB
SMOOTH-AS-GLASS RO-TA-TOR
EIGHT-POSITION DAMP DRYER
ROLL-RIM TUB DESIGN
STEAM-SEAL COVER
NON-CLOG DRAIN
SEALED-IN-OIL MECHANISM

Washer sales will come easy to the Norge dealer, for he will be able to point out—and prove—that the Norge Ro-ta-tor washer handles the family laundry *in less time, with less effort* and *at less cost!*

Built to be the GREATEST VALUE IN ITS FIELD

1 WASHES... The *lively* water-action forces clothes "up, down and around"—flushing suds through every mesh of the fabric—time, after time, after time. Small wonder that the "heavy work" of washing is done so well!

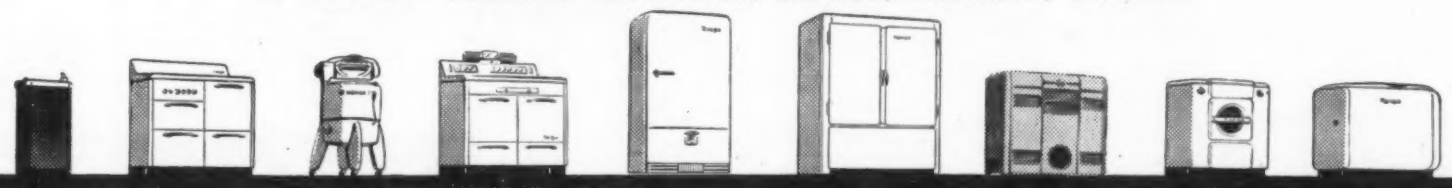
2 RINSES... The same Ro-ta-tor that produces the *triple-washing action* provides an *agitated* rinse that removes soap and loosened soil. The "up, down and around" action again proves the excellence of Norge engineering.



3 LINE-DRIES... The pressure cleanser not only removes excess water, but flushes out any remaining soil—expertly *conditioning* clothes for the line. Laundering with the Norge Ro-ta-tor washer is "as simple as *one-two-three.*"

NORGE
HOUSEHOLD APPLIANCES

NORGE DIVISION • BORG-WARNER CORPORATION
DETROIT 26, MICHIGAN
IN CANADA: ADDISON INDUSTRIES, LIMITED, TORONTO, ONTARIO



A BORG-WARNER INDUSTRY . . . SEE NORGE BEFORE YOU BUY

Portland Williamette Co. Formed as Distributor

PORTLAND, Ore. — Organization of the Portland Williamette Co., which will distribute electrical appliances, radios, and miscellaneous merchandise, was announced here by John B. Simons, president.

The new company's offices would be located at 3909 N.E. Broadway, in the Simons Furniture Co. Building, until more suitable quarters could be secured.

Other officers of the new firm include Clifford L. Fandrem, vice president, and Fred Fuge, secretary-treasurer.

Niles & Piper Establish Buffalo Dealership

BUFFALO—A certificate of partnership has been filed here for the North End Electric & Refrigeration, 3260 Main St. Partners are Charles E. Niles and Edward N. Piper.

San Diego Bureau To Serve as 'Clearing House' For Scheduling of Manufacturers' Meetings

SAN DIEGO, Calif. — Frank J. Guasti, manager of Parmelee Dohrmann Co., was elected president of the Bureau of Radio and Electrical Appliances of San Diego county for the coming year in a recent election by mail.

Mr. Guasti has chairmanned the planning committee of the organization since its inception two years ago. He has also headed the dealers' gas range committee.

Other officers elected include: Lou Wiese, Wiese's, Ltd., first vice president; O. G. Thompson, G. E. Supply Corp., second vice president; Sam L. Hall, Electric Supplies Distributing Co., treasurer.

Newly elected directors are:

Harvey Byers, Churchill & Cassou, Ltd., Escondido; Harry E. Callaway, Thearle Music Co.; A. K. Chamberlain, Refrigeration Equipment Co.; Albert Dryer, Dryer's Standard Furniture Co.; Paul A. Du Pont, Walker's; Glen Dutton, Dutton's Radio Store; Harry Franz, Harrington's Appliances; Ralph French, French's Commercial Refrigeration; R. E. Harris, S. D. Standard Electric Corp.

Elmer B. Hazie, San Diego Auto Electric Co.; Jerry Heilbron, Heilbron Electrical Co.; E. W. Kinmore, Kinmore Electric Co., Chula Vista; Archie Marsden, G. E. Distributing Branch; E. W. Meise, San Diego Gas & Electric Co.; W. W. Powell, Coast Electric Co. (past president); Al Reynolds, Reynolds Radio Co.; Ben Rogers, Westinghouse Electric Supply Corp.; Elmer Small, H. L. Benbough Co.; Robt. Swearengin, El Cajon Supply Co., El Cajon.

The suggestion that the bureau act as a clearing house for product meetings of manufacturers and distributors planned for this territory has brought an immediate affirmative response, it is reported.

When distributors or manufacturers representatives decide a meeting in the San Diego area should be held, they either phone or write to the bureau office, inquiring as to what dates, near the date they have in mind, are open.

When the date is set, it is posted on a large wall chart at bureau headquarters as "claimed." In this way no one will knowingly stage a conflicting meeting.

"Home Planners Week," which opened recently, was the first fall activity of The Home Planners Institute in which the bureau has been active, it was reported.

Kelvinator Distributors See Lines

The first of the new 1946 Kelvinator and Leonard refrigerators took their first bows last week as zone managers and distributors met in Detroit, Chicago, Kansas City, New York, and Washington.

One of the first Kelvinator ranges to be produced for postwar is a center of attraction as Kelvinator and Leonard zone managers and distributors met in Detroit last week for the first of a series of meetings.

LARKIN MECHANICAL REFRIGERATION

The Watchdog of the Nation's Food Supply

Refrigeration Products

Humi-Temp Forced Convection Units—Patented CROSS-FIN-COILS—Bare Tube Coils—Zinc Fused Steel Plate Coils—Disseminator Pans—Heat Exchangers — Evaporative Condensers — Instantaneous Water Coolers—

See Your Jobber or Write Direct

LARKIN COILS,

519 Memorial Drive, S.E., Atlanta, Ga.

WILLIAMS ICE-O-MATIC REFRIGERATION

For nearly 20 years Williams ICE-O-MATIC *compressor units* have been meeting the needs of those manufacturers of commercial refrigeration equipment who know that economy, efficiency, and trouble-free operation "pay off."

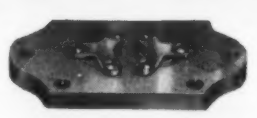
Proved performance is of utmost importance if you are to meet the keen competition that the postwar years will bring. Hence it is worth your while to find out what Ice-O-Matic has to offer . . . to learn how modern engineering will make Ice-O-Matic units even more desirable than ever.

Ice-O-Matic units, built even better because of the experience and facilities augmented by exacting wartime production, will be available as fast as manufacturing restrictions permit. Wide choice of sizes and styles, in ¼ to 5 h.p. capacities. For further information, write now to WILLIAMS OIL-O-MATIC DIVISION, Eureka Vacuum Cleaner Company, Bloomington, Illinois.

ARMY E NAVY

For continued excellence in producing tough-to-build equipment, Williams employees have *five times* received the Army-Navy Award, as well as the USAAF "Approved Quality Control Rating."

"Jim, those CHICAGO SEALS *are really paying off. We're doing more jobs than ever, and no 'call backs' either!"*



CHICAGO VALVE PLATES

Pay off big in time and work saved, too. They're the only refrigeration compressor valve plates with removable valve seats. Sizes for most compressors.

CHICAGO GENERAL REPLACEMENT SEALS

Increase profits by going on refrigeration compressors quickly and easily, even if shaft is bent or scored. They stay put and seal tight.

MODERN DESIGN

SOLD BY JOBBERS

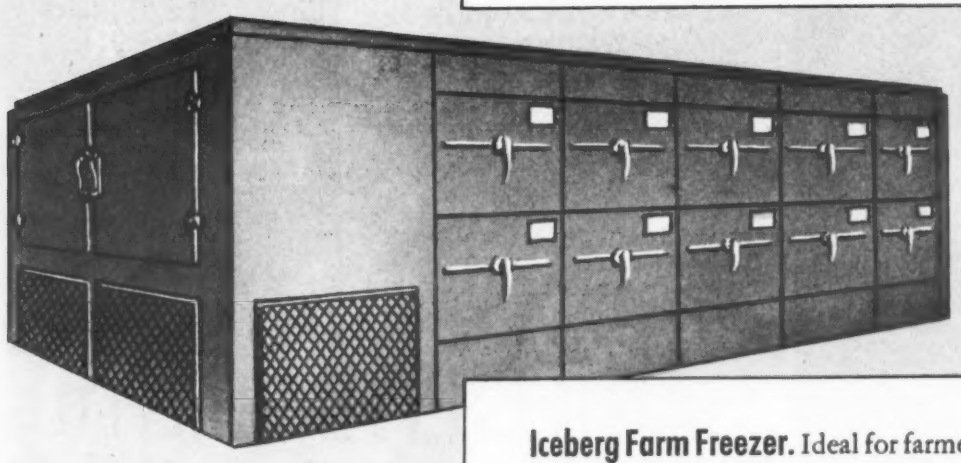
CHICAGO SEAL CO.

20 NORTH WACKER DRIVE • CHICAGO 6, ILL.

DISTRIBUTORS WANTED!

For a revolutionary new frozen food storage unit

Iceberg Commercial Unit. Ideal for food stores, locker operators, hotels, hospitals, apartment house owners. 60 six-cubic-foot locker drawers for individual renters, with identification card holders for marking names.



Iceberg Farm Freezer. Ideal for farmers, rural dwellers and stores. 2 to 10 six-cubic-foot locker drawers with card holders to mark type of food stored and date of storage.

If you've an eye for extra business, then you're our man! For we're offering you the newest, most practical, most *sell*able system for frozen food storage yet devised. It's called the ICEBERG REFRIGERATED LOCKER SYSTEM, and its exclusive patented features give it these advantages over *all other* units.

8 Point Superiority

1. **Iceberg eliminates the danger and inconvenience to patrons of a Zero temperature room.**
2. **Iceberg maintains safe Zero temperature at all times.**
3. **Iceberg has built-in blast freezer for quick freezing.**
4. **Iceberg keeps food conveniently segregated for ready access.**
5. **Iceberg is a portable, sectional, completely self-contained unit.**
6. **Iceberg is a fully insulated unit.**
7. **Iceberg can be quickly and easily installed and put in operation in 24 hours.**
8. **Iceberg carries lowest installation cost . . . lowest operating cost.**

But don't just take our word for its sales possibilities. A recent issue of a leading national picture magazine says in a five-page story that frozen food storage is fast becoming one of the most lucrative new industries in the country. Now's your chance to get in on the ground floor! Write today for full details on this plan for extra profits with ICEBERG!

WRITE FOR FULL DETAILS TODAY!

In your letter please give us background and history of your business including such information as lines now carried, banking connections, territory you cover, number of years in business, names of officers, etc.

ICEBERG

REFRIGERATED LOCKER SYSTEMS, INC.

EMPIRE STATE BUILDING, NEW YORK CITY

WRITE FOR CATALOG

Do to the paper shortage we will not issue a catalog in 1945

SERVICE PARTS CO.
2511 Lake St. Melrose Park, Ill.

Hackett Upped by Navy; Plans Coast Dealership

OAKLAND, Calif. — Francis W. Hackett, veteran in the appliance field and formerly general manager of Good Housekeeping Shops in Detroit, has been promoted to the rank of commander in the U. S. Naval Reserve, the Navy has announced.

Now officer in charge of the Navy's Electronic Supply Branch here, Commander Hackett plans to establish a chain of appliance stores on the Pacific coast after he is released from the Navy.

El Paso Distributor Named by Admiral

EL PASO, Tex.—Sun City Distributors here has been named exclusive distributor of Admiral radios, refrigerators, electric ranges, and home freezers for the El Paso, Tex., and Albuquerque, N. Mex., territories, announced Wallace C. Johnson, manager of Admiral field activities.

Self-Service Laundry Chain Will Employ Automatic Washers

MANSFIELD, Ohio — A new national self-service laundry plan, where homemakers can wash, dry, and iron their clothes, has been established by the Automatic Laundry Distributors, Inc., Mansfield, sole owners and operators of the business, who had the cooperation of the Westinghouse Electric Appliance Division in designing and equipping the public laundry service.

Plans for the new service call for automatic washers, clothes dryers, and electric ironers set in modern style, fluorescent lighted rooms, and a lounge and playroom, said I. Frank Brownson, manager of the laundry equipment department of Westinghouse, and Lloyd C. Strite, president of the Automatic Laundry Distributors, Inc., in a joint announcement of the complete laundry service.

The first of these self-service laundries, called the Laundromat-Equipped Half-Hour Laundry, was opened in Mansfield this month and is equipped with 30 Laundromat automatic washers. Westinghouse clothes dryers and ironers will be added later.

"Public acceptance of the new service in Mansfield has been exceptionally good," Mr. Brownson said. "The facilities at the self-service laundry have been running 100% since the opening day. It has not only relieved a serious laundry problem in the city, but it has given the women who use the service a new conception of how simple and easy wash day can be.

"When the clothes dryers are added, women will no longer be dependent upon the weather for a perfect wash day.

The Mansfield installation, based on plans prepared by Westinghouse groups such as the Better Homes Department, includes a modern style lounge and a children's playroom, both fluorescent lighted. Future plans call for adding Westinghouse sunlamps and Sterilamps as well as air conditioning and the Precipitron electrostatic air cleaner that removes dust and dirt from the air.

At Mansfield, a woman can drive her car to the parking lot adjacent to the self-service laundry and after taking in her laundry and having it weighed, her only job is to load the machine, put in the necessary soap, which is furnished free, set a dial for the type of clothes being laundered and turn on the starting switch. Thirty minutes later her clothes are washed and damp dried at a cost of 25 cents a Laundromat load. The patron is assigned as many machines as she needs to complete her entire washing at one time.

"Water is kept at the right temperature and at rain water softness by automatic Permutit softeners," Mr. Brownson explained. "A trained laundry expert supervises all the washings and advises patrons on their wash day problems."

While the washing is going on, the patrons can go shopping or read or knit in the comfortable lounge.

A bank of 20 automatic clothes dryers will be installed in the near future and this will provide 30 minute drying service at a cost of 25 cents per load.

A trained attendant will give free instructions on the new Westinghouse ironer while the patron is waiting in the lounge during the washing and drying period. Ironers will be installed when they are available.

Laundry Station Does Job In Half an Hour

The new Laundromat-Equipped Half-Hour Laundry, designed and planned by the Westinghouse Electric Appliance Division for the Automatic Laundry Distributors, Inc., sole owners and operators, is shown here as Mrs. K. C. Toulouse puts her clothes into one of the 30 automatic washers.

So. Bearings Promotes Bostick, Rhodes, Nisbet

CHARLOTTE, N. C. — Promotion of P. E. Bostick, Clarence E. Rhodes, and Harry Nisbet by Southen Bearings & Parts Co., automotive replacement and electrical appliance distributor here, has been announced.

After 16 years as head of branch operations for the company, Mr. Bostick has been transferred to manage the electical appliance department.

Mr. Rhodes, formerly manager of the Charlotte store, has been promoted to the newly created position of manager of store operations. In this capacity he will operate from the Charlotte store.

Leaving his former position as head of counter operations, Mr. Nisbet will assume the management of the Charlotte store. He has been with the firm for nine years.

Southern Bearings & Parts Co. operates seven automotive stores located in North and South Carolina, which also handle electrical appliances. They are distributors for such lines as Norge, Bendix, and Ironite, in addition to handling other smaller appliance lines.

Electrimatic

AUTOMATIC CONTROL VALVES AND REGULATORS

2100 INDIANA AVENUE · CHICAGO 16, ILL.

STOKOL

MARKETS

-from a five-room cottage to a 15-floor apartment

STOKOL dealers find that practically any prospect for a Stoker is a prospect for a STOKOL Stoker. The wide range of models and capacities using all types of coal meets just about every heating requirement. The combination of STOKOL Stoker performance and prospective customers offers great profit possibilities to STOKOL dealers. Why not join them? Send the coupon today. STOKOL STOKER Company, Inc., Indianapolis 7, Indiana.

STOKOL STOKER CO., INC.
1145 E. 22ND ST., INDIANAPOLIS 7, IND.

Gentlemen: Send details of Stokol profit possibilities for me as a dealer.

NAME_____

ADDRESS_____

CITY_____ STATE_____

ACRN

SO LITTLE DOES SO MUCH!

THIS MUCH **THAWZONE** (BY WEIGHT)

1 to 150

(in hermetic units 1 to 300)

FOR THIS MUCH REFRIGERANT (BY WEIGHT)

AND COSTS SO LITTLE!

The ⅛ of an ounce of Thawzone needed per pound of refrigerant costs only 10¢ if bought in the 4-ounce size, less in the pint size. The cost of any job is computed by figuring 10¢ for each pound of refrigerant in the system. ⅛ ounce = 1 teaspoonful.

The ratio illustrated above shows why there are no dilution-of-refrigerant worries. TZ destroys moisture and neutalizes acid chemically.

Ask the refrigeration supply jobber

THAWZONE
The PIONEER FLUID DEHYDRANT

HIGHSIDE CHEMICALS CO.
195 Verona Ave.
NEWARK 4, N. J.

Also Makers of **TRACE** *Refrigerant Leak Detector*

Production Geared

● Would you like to get *double duty* out of your first year's factory production? Do you want the quick distribution you will need during reconversion?

Then consider the $4,496,734,000 Chicago market—a rich, compact area located at the heart of America, easily accessible to factory shipments and salesmen alike.

Here is a market with a huge pent-up demand for radios, washing machines, refrigerators, "big unit" products generally. Moreover, it is fortified by diversified income and billions in savings.

to Faster Sales

● No matter whether your production is large or small, the Chicago market will reward your attention as the place to get the consumer buying you want.

This strategic area offers quick sales and solid dealer and consumer preference when the first easy selling conditions pass and the competition gets tough.

Long famous for its big volume purchases, the Chicago market has repeatedly broken factory and branch sales records.

Available for your study and use is a specific Tribune sales program based on the findings of an auto and household appliance investigation among consumers and dealers. To get these pertinent facts, address: C. S. Benham, Manager, National Advertising, Chicago Tribune, Tribune Tower, Chicago 11, Illinois.

in the great Chicago Market!

● Get started quickly in this great market at one low cost and through a single advertising medium—the Chicago Tribune. One out of every three families in 756 cities and towns of 1000 or more population in this area reads the Tribune on weekdays. On Sundays, it is practically every other family.

Only the Tribune offers you a choice of monoroto, coloroto, comicolor, newsprint color and black-and-white printing—whichever you prefer —at one of the lowest milline rates in the country.

For marketing facts and merchandising ideas, call a Tribune representative.

CHICAGO TRIBUNE
THE WORLD'S GREATEST NEWSPAPER

September average net paid total circulation:
Daily, over 1,025,000; Sunday, over 1,300,000

Sales of All-Electric Kitchens May Solve Problems of Trade-ins, New Competition

'Group' Appliance Sales Promotion Is Next Merchandising Step, Says Hotpoint Official

CHICAGO — By promoting "all-electric" kitchens and thus selling appliances in groups rather than singly, appliance dealers will be in a much better position to cope with the problem of trade-ins and new types of competition, believes Floyd M. Slasor, manager, refrigeration sales division, Edison General Electric Appliance Co. (Hotpoint).

"The lush 'pent-up' demand period when dealers have long waiting lists will pass sooner than many of us realize, and plans must be made now to meet competitive conditions that will be sterner than in the past," he said. "With increased production facilities enlarged by most of the industry's leaders, plus several new manufacturers, it is only a matter of time until the old-time hunt for business will be underway again."

NEW COMPETITION

Indications are that new competition for retailers will come from many types of retailers not hitherto interested in refrigeration and other appliances, citing automobile supply stores, variety stores, and dry goods concerns as examples, according to Mr. Slasor. He added:

"An even more serious threat to profitable retailing is held in the fact that an estimated 50% of future sales will be 'replacements.' That means that the 'trade-in' phase of refrigerator merchandising has definitely arrived.

"In the beginning, that may seem to be a phase that will adjust itself, much as have other merchandising problems successfully met in the past. As owners of 10-year old mechanical models become increasingly aware that dealers will make 'offers' on their old model, the evils of 'highest bidding' will become apparent."

SATURATION POINT

Approximately 23 million electric refrigerators were sold between 1920 and 1942. All of the homes that bought those units, with allowances for past replacements, plus a possible 7 million more predicted as the number "now waiting for" new models, brings the apparent saturation at the opening of the competitive period, up to well over 80% of the nation's wired homes, stated Mr. Slasor.

Year	Sold
1920	10,000
1921	5,000
1922	12,000
1923	18,000
1924	30,000
1925	75,000
1926	210,000
1927	375,000
1928	535,000
1929	778,000
1930	791,000
1931	948,676
1932	798,000
1933	1,065,105
1934	1,372,396
1935	1,590,023
1936	2,079,535
1937	2,369,000
1938	1,279,202
1939	1,956,000
1940	2,718,700
1941	3,550,000
Grand Total	

Merchandising methods developed from the earliest days of the industry were based upon smart advertising, display, and aggressive selling, he continued. The skillful salesman wove his dramatic story around health and savings. The salesman in postwar will not replace present equipment that includes a sloppy ice-pan and uncertain "ice-crate," to offer contrast with the new and modern. Instead, he will find a fairly sound 10 or 12-year old electric refrigerator, the Hotpoint official said, adding:

"The next step forward in a merchandising sense, is to work toward wider usefulness of the refrigerator. It must be sold as the heart of a 'refrigeration center' in the kitchen that stores all types of food. This will permit the sale of metal cabinets that augment the refrigerator and supply up to 30 cu. ft. of storage space.

ACCESSORIES HELPED

"During the earlier days of automobile merchandising, dealers ran into the 'trade-in' situation by which they became 'highest bidders' for old models. They overcame that by increasing the number of 'accessories' sold with each car. Until the accessory package was added, with its high profit rate, dealers frequently lost money during the banner years.

"Automobile manufacturers helped their dealers work out 'trade-in' programs keeping them pre-determine used car values, but the profits from the increased dollar volume of each sale, when accessories were added, put the retailer upon a profitable basis.

"Selling metal cabinets to increase the dollar volume of the single sale is a natural and not difficult step for refrigerator dealers. The most natural approach is through the sale of 'all-electric' complete kitchens. That vehicle gives the customer a chance to see the equipment in operation in home surroundings, and incidentally, it makes selling easier.

"Literally millions of women have expressed themselves as interested in an 'all-electric' kitchen for postwar. Our company has sold more than two million kitchen planning guides, 'Your Next Kitchen by Hotpoint' during the past two years. No merchandising idea in recent times has met with a more enthusiastic response.

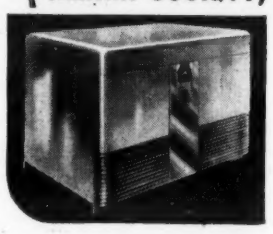
(Concluded on next page)

Amana HOME FREEZERS

Years of experience in building quality low-temperature refrigeration equipment are behind Amana Home Freezers. This means complete owner satisfaction.

AMANA MODEL 200 . . A combination Freezer-Cooler Unit for home or commercial use. Size 8'0" long x 4'0" wide x 6'10" high. It's a large capacity sharp Freezer and Frozen Food Cabinet combined with a Walk-In Cooler. *A complete private locker plant!* Write for information.

REFRIGERATION DIVISION
AMANA SOCIETY, AMANA, IOWA



AMANA MODEL 90
A nine cu. ft. unit for larger families. Exclusive full-opening lid for easy access to all contents. Modern in every detail.

AMANA MODEL 50
A five cu. ft. model for the average home. Beautiful design . . . full opening, counter-balanced lid—all contents easily accessible.

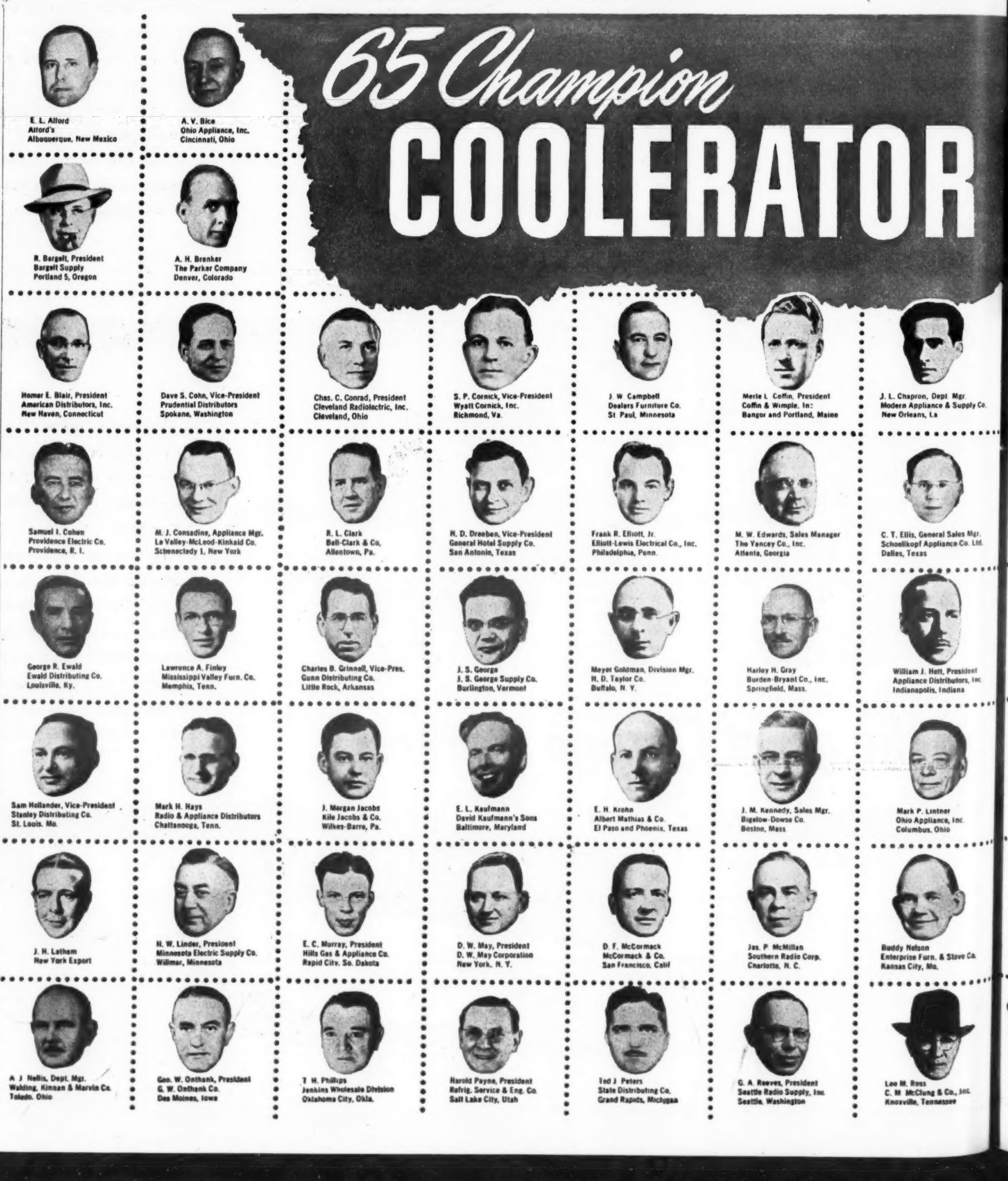
NIBCO WROT
AND CAST
VALVES AND FITTINGS
for Refrigeration
NORTHERN INDIANA BRASS CO.
ELKHART, INDIANA

GENUINE MAYFLOWER
CONDENSING UNITS AND PARTS
Jobber Inquiries Invited
A complete line backed by nearly a quarter century of user confidence. Write for prices.

MAYFLOWER PRODUCTS, INC.
13 S. 5th St., Richmond, Ind.

KRACK ENGINEERED
UNIT COOLERS
FIN COILS
AIR CONDITIONING
Refrigeration Appliances, Inc.
923 W. Lake St., Chicago 7, Ill.

65 Champion COOLERATOR D



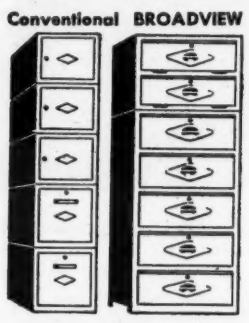
E. L. Alford, Alford's, Albuquerque, New Mexico
A. V. Bice, Ohio Appliance, Inc., Cincinnati, Ohio
R. Bargelt, President, Bargelt Supply, Portland 5, Oregon
A. H. Brenker, The Parker Company, Denver, Colorado
Homer E. Blair, President, American Distributors, Inc., New Haven, Connecticut
Dave S. Cohn, Vice-President, Prudential Distributors, Spokane, Washington
Chas. C. Conrad, President, Cleveland Radioelectric, Inc., Cleveland, Ohio
S. P. Cornick, Vice-President, Wyatt Cornick, Inc., Richmond, Va.
J. W. Campbell, Dealers Furniture Co., St. Paul, Minnesota
Merle L. Coffin, President, Coffin & Wimple, Inc., Bangor and Portland, Maine
J. L. Chapron, Dept. Mgr., Modern Appliance & Supply Co., New Orleans, La
Samuel I. Cohen, Providence Electric Co., Providence, R. I.
M. J. Considine, Appliance Mgr., La Valley-McLeod-Kinkaid Co., Schenectady 1, New York
R. L. Clark, Bell-Clark & Co., Allentown, Pa.
H. D. Dreeben, Vice-President, General Hotel Supply Co., San Antonio, Texas
Frank R. Elliott, Jr., Elliott-Lewis Electrical Co., Inc., Philadelphia, Penn.
M. W. Edwards, Sales Manager, The Yancey Co., Inc., Atlanta, Georgia
C. T. Ellis, General Sales Mgr., Schoellkopf Appliance Co. Ltd., Dallas, Texas
George R. Ewald, Ewald Distributing Co., Louisville, Ky.
Lawrence A. Finley, Mississippi Valley Furn. Co., Memphis, Tenn.
Charles B. Grinnell, Vice-Pres., Gunn Distributing Co., Little Rock, Arkansas
J. S. George, J. S. George Supply Co., Burlington, Vermont
Meyer Goldman, Division Mgr., H. D. Taylor Co., Buffalo, N. Y.
Harley H. Gray, Burden-Bryant Co., Inc., Springfield, Mass.
William J. Holt, President, Appliance Distributors, Inc., Indianapolis, Indiana
Sam Hollander, Vice-President, Stanley Distributing Co., St. Louis, Mo.
Mark H. Hays, Radio & Appliance Distributors, Chattanooga, Tenn.
J. Morgan Jacobs, Kile Jacobs & Co., Wilkes-Barre, Pa.
E. L. Kaufmann, David Kaufmann's Sons, Baltimore, Maryland
E. H. Krohn, Albert Mathias & Co., El Paso and Phoenix, Texas
J. M. Kennedy, Sales Mgr., Bigelow-Dowse Co., Boston, Mass.
Mark P. Lintner, Ohio Appliance, Inc., Columbus, Ohio
J. H. Latham, New York Export
N. W. Linder, President, Minnesota Electric Supply Co., Willmar, Minnesota
E. C. Murray, President, Hills Gas & Appliance Co., Rapid City, So. Dakota
D. W. May, President, D. W. May Corporation, New York, N. Y.
D. F. McCormack, McCormack & Co., San Francisco, Calif
Jas. P. McMillan, Southern Radio Corp., Charlotte, N. C.
Buddy Nelson, Enterprise Furn. & Stove Co., Kansas City, Mo.
A. J. Nellis, Dept. Mgr., Walding, Kinnan & Marvin Co., Toledo, Ohio
Geo. W. Oathank, President, G. W. Oathank Co., Des Moines, Iowa
T. H. Phillips, Jenkins Wholesale Division, Oklahoma City, Okla.
Harold Payne, President, Refrig. Service & Eng. Co., Salt Lake City, Utah
Ted J. Peters, State Distributing Co., Grand Rapids, Michigan
G. A. Reeves, President, Seattle Radio Supply, Inc., Seattle, Washington
Lee M. Ross, C. M. McClung & Co., Inc., Knoxville, Tennessee

New! The **BROADVIEW**

Safe-Way's Sensational

WIDE-DESIGN LOCKER

"Acclaimed the greatest single advancement in the entire history of the locker industry."



***Compare the* BROADVIEW**

(Completely assembled 5 drawer, 2 Door Tier)

- Years ahead—in beauty, utility, construction!
- Exclusive Wide Design—increases yearly rental 50% per tier.
- Greater Capacity—with contents entirely accessible.
- Completely assembled—no high costs for assembly.
- Priced the same as other conventional models.

See the wonderful new BROADVIEW Locker on Display at your dealer's today. Plan *now* to offer your patrons its many extra advantages. With the BROADVIEW wide-design Locker in your plant you are assured of the *preferred* business in your community.

FOR IMMEDIATE SHIPMENT...

Write Us Today for Name of Your Nearest Dealer!

SAFE-WAY

SAFE-WAY FOOD LOCKER COMPANY

175 W. Jackson Blvd. Chicago 4, Illinois

★ ★ *BUY VICTORY BONDS* ★ ★

Promotion of Group Sales Is Urged

(Concluded from preceding page)

"All dealers will not want to sell complete kitchens, nor will all prospects for a refrigerator be persuaded to install one. But it is probable that most of them will buy one or more metal cabinets if they see them installed to augment the storage space of the refrigerator.

"While each manufacturer is offering new developments in his product to increase its usefulness, none of these will be as easily dramatized for the customer as the story of increased storage space by augmenting it with cabinets.

"A study of the increase in annual sales volume shows a parallel trend of reducing price. While the 1920 price was between $550 and $600, the 1941 average price was around $150. We know that increased volume, brought about by vigorous merchandising, created that volume and brought the price down. But, as the dealers and manufacturers brought lower prices to reach an ever wider market, their profit per sale became less each year.

"While the average sale dollar volume will probably rise a little during the next two years, an extension of past trends indicates that it will return to 1941 after production again surpasses demand," said Mr. Slasor.

"When this period following pent-up demand arrives, dealers who have built their businesses around complete kitchens and other multi-unit sales will be in a strong position.

"Merchandising 'planned' groups of appliances calls for more organization than specialty selling. In addition to finding prospects and demonstrating the added value of buying appliances in matched groups to increase their usefulness, the dealer will need connections with carpenters, plumbers, and electricians. He will need a man who can follow up inquiries for kitchen remodeling and figure the entire job.

"While appliance dealers will not become remodeling contractors, they will have arrangements by which they can give an estimate on an entire kitchen remodeling job, and take the order for the entire project. Because many of the items that go into a completely remodeled kitchen are sold by building supply, and home-furnishings dealers who are already established, the appliance dealer should arrange to cooperate with any type of merchant who can originate projects that mean business for all.

Appliance dealers have the only new product, in the home freezer, that appears to have a large 'waiting market.' On that product, even more than on conventional refrigerators, the competition will be extremely keen both among manufacturers and dealers. It is generally believed that almost every farm and suburban home will be a good prospect.

"Because locker operators and all types of farm stores will sell home freezers, merchandising methods that emphasize greater use-value will be necessary if regular appliance dealers are to get this business. Here, too, plans for 'building-in' freezer cabinets in basements, utility rooms, and kitchens, will create sales opportunities," Mr. Slasor stated.

Advises Dealers to Push 'Electric Kitchen'

Floyd M. Slasor, manager of Hotpoint's refrigerator sales division, tells in the accompanying article why he thinks appliance dealers will be much farther ahead if they prepare to promote sales of appliances in groups and strive for sales of "all-electric kitchens."

50% Capacity Increase Planned by Pemco

BALTIMORE — First step in the reconversion program of Pemco Corp., manufacturer of porcelain enamel frit, is a 50% increase in plant capacity by the installation of an additional continuous smelter unit and further improvements on the four units now in operation, according to Harold Wolfram, vice president and works manager.

This wholly continuous smelter is an exclusive Pemco development, and its construction is protected by company patents, it was stated. Electronically controlled, the smelter produces frit that is "never touched by human hands" until it reaches the customer, said Mr. Wolfram.

DISTRIBUTORS ARE ALL SET TO SELL!

Mack Rowe
Keith, Simmons Co., Inc.
Nashville, Tennessee

E. C. Schuman
Sou. Tier Electrical Supply Co.
Binghamton, New York

Al. Seligman, Appliance Mgr.
Strauss-Frank Co.
Houston, Texas

R. R. Schoenberg, General Mgr.
S. E. Schulman Company
Chicago, Illinois

M. G. Sues
Sues Young Co.
Los Angeles, Calif.

Walter P. Soneson
S. & S. Auto Parts Co.
Duluth, Minnesota

S. E. Sapp, Dept. Mgr.
May Hardware Co.
Washington, D. C

M. Shore
Paul Jeffrey Co.
Syracuse, N. Y.

E. J. Schonberg
Fargo Glass & Paint Co.
Fargo, N. D.

J. A. Taylor, Vice-President
Taylor Electric Co.
Milwaukee, Wis.

Henry E. Thornburg, Vice-Pres.
Van Zandt Supply Co.
Huntington, W. Va.

Peyton Watson, Vice-President
Consolidated Automotive Co.
Jacksonville, Fla.

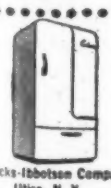
L. L. Williams, President
J. A. Williams Co.
Pittsburgh, Pa.

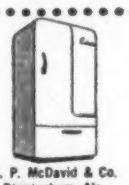
Paul Wolk, President
Bickford Bros. Co.
Rochester, New York

C. B. Wissing
Ebner Appliance Distributors,
Vincennes, Indiana

Wayne V. Wright
Ohio Appliances, Inc.
Dayton, Ohio

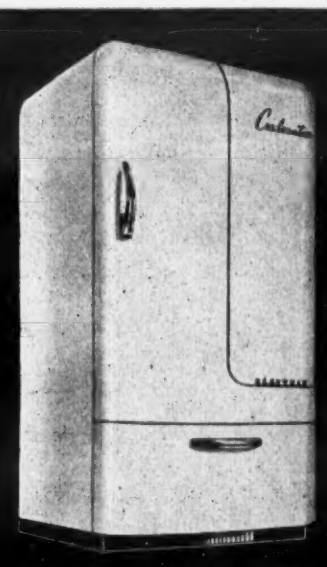
A. H. Zimmerman
Republic Supply Co.
Detroit, Michigan


Harrocks-Ibbotson Company
Utica, N. Y.
Photo received too late for publication

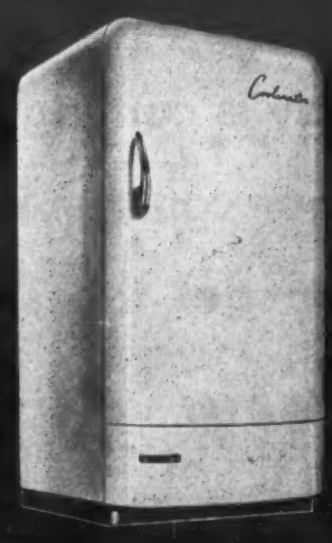

R. P. McDavid & Co.
Birmingham, Ala.
Photo received too late for publication

Soon The Coolerator Company will again be producing the highest type of home refrigeration. And when that day comes, this Champion Coolerator lineup will go into action! These 65 Coolerator Distributors were selected by us after careful study to determine the firms best qualified to serve you! Keep in close touch with your distributor so that you will have the latest news on availability of Coolerator's profitable items. The Coolerator Company, Duluth 1, Minnesota.

Coolerator


NEW COOLERATOR ELECTRIC
7½-cu. ft. and 9½-cu. ft. models

HOME AND FARM FREEZERS
Home Freezer—6½-cu. ft.
Farm Freezer—15-cu. ft.


NEW ICE-CONDITIONED COOLERATOR
5-cu. ft.—75-lb. ice-capacity
6½-cu. ft.—100-lb. ice-capacity

By comparison— You'll buy **PAR**

REFRIGERATION EQUIPMENT

WRITE FOR CATALOG

Lynch MANUFACTURING CORPORATION

DEFIANCE, OHIO, U. S. A.

SEND for CATALOG of SORENG

ELECTRICAL PRODUCTS for REFRIGERATORS-APPLIANCES

SORENG MANUFACTURING CORPORATION

1907 Clybourn Ave.-Chicago 14, Ill.

State Legislatures Show Increasing Interest In Laws to Control Instalment Financing

NEW YORK CITY—A number of state legislatures this year evidenced interest in proposals to regulate instalment sales financing, with indications that the issue will be raised increasingly in state capitals throughout the country as merchandise becomes more plentiful and federal wartime curbs on consumer credit are eased out.

Past proposals and laws already enacted in some states point to the probability of a lack of uniformity in the measures which will be advocated. Some will seek to control both interest rates charged and the form of conditional sales contract. Others will be confined to the form of the contract. Enforcement through licensing of finance companies and instalment merchandisers will be sought in some instances, while in others enforcement without licensing will be advocated.

CALIFORNIA LAW

California's legislature took one of the most significant legislative steps in this field this year with the enactment of a bill to limit interest and carrying charges of the time-payment sales of new and used automobiles. While this particular measure is designated only to wipe out alleged abuses in motor vehicle sales financing, similar bills affecting all retail instalment sales have been proposed elsewhere.

"The amount of the time-price differential in any conditional sale contract for the sale of a motor vehicle," the new California law stipulates, "shall not exceed 1% of the unpaid balance multiplied by the number of months, including any excess fraction thereof as one month, elapsing between the date of such contract and the due date of the last instalment, or $25, whichever is the greater, provided that such contract may provide for interest on any delinquent instalment from and after the date of delinquency, and for reasonable collection costs and fees in the event of delinquency.

"If the seller, except as the result of an accident and bona fide error in computation, shall violate any provision of this sub-section, the conditional sale contract shall not be enforceable except by a purchaser for value, and the buyer may recover from the seller in a civil action three times the total amount paid on the contract balance by the buyer to the seller or his assignee pursuant to the terms of such contract."

WHAT MUST BE LISTED ON SALES CONTRACT

The new California measure further provides that the sales contract be in writing and list: Cash price; amount of buyer's down payment; amount unpaid on cash price; cost to buyer of any insurance; the premium for which is included in the contract balance; description and itemization of amounts, if any, which will actually be paid by seller or his assignee to any public officer as fees in connection with the transaction; amount of unpaid balance; amount of the time-price differential, if any, and, if the time-price differential, or any part thereof, is expressed as interest on unpaid instalments before they are due, the rate of interest thereon; contract balance owed by buyer to seller; and the number of instalments required to pay the contract balance, the amount of each instalment, and the date for payment.

It further requires that if any charge for insurance is included, an insurance policy or policies or a certificate of insurance under a master policy shall be issued and the seller shall within 30 days after the execution of the conditional sale contract send or cause to be sent to the buyer the original or an exact copy of such policy.

LICENSING NOT INCLUDED

The California legislation varies from laws on the subject in Indiana, Maryland, Michigan, and Wisconsin in that licensing is not included and a maximum time-price differential is prescribed.

Under a bill introduced in the Ohio legislature this year, maximum financing charges on retail instalment contracts would have been prescribed as follows: 12% a year on the first $100 of the unpaid balance; 10% on the next $200 of unpaid balance, and 7% on unpaid balance in excess of $300. The proposal also would have prescribed the form of retail instalment contract and set a scale for additional charges against delinquent payments. A maximum fine of $1,000 or a year's imprisonment, or both, was proposed for each violation.

A bill providing for the registration of sales finance companies with the state banking department was introduced but not enacted in the 1945 Connecticut legislature. The measure would have permitted the banking commissioner to investigate the business of any finance company, and required publication of an annual sworn statement.

PENNSYLVANIA GROUP TO STUDY PROBLEM

Pennsylvania's legislature this year set up a special committee to investigate alleged "unscrupulous and unconscionable practices" of some finance companies and instalment dealers. Pending its report to the next legislative session, this committee already has recommended that the state departments of revenue, insurance, and banking draft specific regulations under existing laws "in an effort to remedy some of the evils" immediately.

Both the Pennsylvania legislation and a similar proposal introduced in the 1945 Delaware legislature, contended that action to eliminate sales financing abuses was particularly necessary now to protect returning service men, as well as the public generally. It was emphasized that action was not sought against the many companies operating ethically and legitimately in the sales finance field.

With the indicated renewal of state legislative interest in instalment sales regulation, some states may follow the action taken by the New York State legislature in 1941, when passage was given a series of bills intended to aid self-regulation by exerting compulsion on irresponsible dealers who ignore ethical standards in instalment merchandising.

Recommended by a group representing business and consumer interests as an alternative to more stringent regulation providing for licensing of all instalment merchandisers, the New York laws set up provisions on contracts, repossession, chattel mortgages, wage assignments, deficiency judgments, garnishments, guarantors, confessions of judgment and insurance, in a way to enable instalment sales interests to regulate themselves without governmental dictation.

Frigidaire Adds Kitchen Cabinet Line

As part of its "kitchen modernization program," Frigidaire Division, General Motors Corp., is introducing a line of kitchen cabinets in individual, "packaged center," and complete kitchen sizes. Emphasis will probably be on the "packaged center" idea with centers for the electric range, refrigerator, and sink, as shown above, being available in a variety of sizes. Dealers should have samples before the end of the year, say Frigidaire officials.

Yes, the great day is coming soon when the people of your community will flock to your store to get the story of the

SENSATIONAL NEW REFRIGERATORS AND FREEZERS FROM PHILCO

NO ADMITTANCE!

to Sedimentation . . . Corrosion . . . Rus

This trio . . . sedimentation, corrosion, rust . . . can gain admittance for their destructive work on sliding pa in the PENN 246 water regulator. Why? Because this va is designed so that *water never comes in contact with slid parts.*

No chance here for those abrasive deposits which cri ple ordinary valves. No rusting of range springs. No p mature wear. Water hammer is eliminated, too . . . yet t valve is extremely sensitive to refrigerant head pressu

Learn more about this new-type water regulator. write today for Bulletin R-1986-A. *Penn Electric Swit Co., Goshen, Ind.* Export Division: 13 E. 40th Street, Ne York 16, U.S.A. In Canada: Powerlite Devices, Le Toronto, Ont.

PENN AUTOMATIC CONTRO

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRES

Inside Dope

By George F. Taubeneck

(Concluded from Page 1)

and natural radio-activity.

In the early period France was represented by Madame Curie, who has had a long line of distinguished successors, including her daughter, Irene Curie, and her distinguished husband, F. Curie-Joliot, who secretly carried on researches on atomic power during the German occupation of France.

Although there is a natural continuity about all scientific development, the decisive discovery which made the atomic bomb possible occurred in late 1938 in Germany.

It was not made by persons working with military objectives in view. It was made by persons who were engaged in fundamental research in physics, and who were working in that spirit of free international collaboration that has characterized scientific progress in the modern period.

The implications of the discovery were soon realized by physicists throughout the world; but with the coming of war it became an important matter of national policy that the work in this field be greatly speeded up, and that it be carried on under great secrecy.

No Monopoly

We cannot assume for a moment that we will have an Anglo-American world monopoly on the use of atomic energy for more than a few years at the most. However, let us suppose that no one had started this work hitherto besides the Anglo-American coalition and the Germans, who are now under our control. We did the job in less than three years, at a cost of approximately two billion dollars.

There is no denying that we have many first-rate physicists and a marvelous industry—just the right combination for this job.

However, the other side of the picture is this: what we can do in three years, others can do in perhaps five or six years, especially with the knowledge which everyone now has that it is not a gamble but that it surely can be done.

As to the cost of two billion dollars, it must be remembered that only a small part of the figure represents research costs. The rest went for industrial plants for making the bombs.

And it also must be remembered that those costs were high because of the inevitable waste associated with extreme urgency.

For example, much money was spent following up (simultaneously) several alternative lines of investigation; when, under peacetime conditions, only one at a time would have been pursued, and solutions might have been found without the expense of developing all the alternatives.

Finally, it must be remembered that two billion dollars is not a very great sum of money in terms of budgets of major powers.

It is, for example, considerably less than the loss to American investors on defaulted German bonds which were floated between World War I and World War II.

It is, moreover, less than 2% of our national annual income—when we operate our industrial plants at maximum capacity, as we have been doing in recent years.

There may be vastly simpler ways of achieving this result. Already, no doubt, a large part of the plants we have built are obsolete. We know so little about this subject that we do not know for sure that the making of atomic bombs requires the vast industrial plants which we have erected for the purpose.

It is conceivable, for example, that in the years to come some small group of Nazi scientists working in some remote haven (say, in South America, or perhaps in Spain), may find a way to accomplish the same result with only small, inexpensive, and inconspicuous equipment.

That is one of the most important reasons why this nation must continue the most careful and thorough investigation of atomic physics—and why we must set up a world order that really covers the entire world—one which does not leave us unaware of what is going on in any remote valley in Spain.

Peace or Death

With this power in man's hands, world cooperation can possibly come. It is peace or death for us and our children.

Let us recapitulate:

(a) Man is now in possession of a new kind of energy source vastly more powerful than anything used before.

(b) It is the culmination of a war effort, built on decades of free international exchange of scientific knowledge.

(c) While we produced the atomic bomb first, other national groups working independently may not be far behind right now.

(d) It is a certainty that, spurred by the knowledge that the thing can be done, any major national group could, without aid from us, and without benefit of espionage, at least do what we have done within a few years.

(e) Our knowledge of this field is very incomplete and it may be possible to do what we have done in vastly simpler ways than the only way known to us at present.

Therefore:

(1) We must set up a world order including all peoples to make certain that atomic power is used only for peaceful purposes, and

(2) We must continue intensive cultivation of fundamental research in atomic physics to the end that we may really know all about this tremendous new source of power so that we may apply it to useful purposes in the years of peace that lie before us.

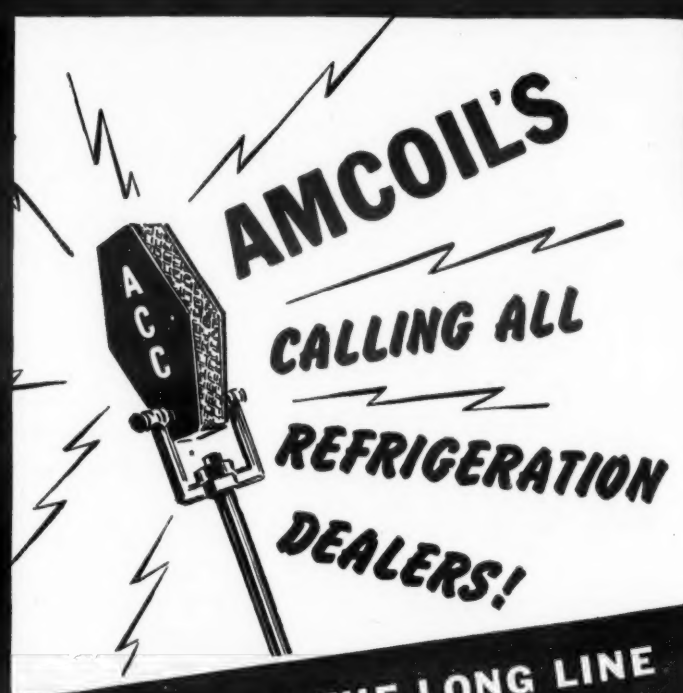
Atomic Bomb Doesn't Justify 'Maginot Mentality'

A warning against the development of a "Maginot Line mentality" of smug complacency because we have created the world's deadliest weapon from the atom, has been sounded in Pittsburgh by one of the nation's leading scientists and experts on atomic physics.

We have no monopoly on atomic explosives—and its creation gives the world a choice of "peace or death," declares Dr. Edward U. Condon, associate director of the Westinghouse Research Laboratories and vice president of the American Physical Society, who has long been a leading figure in nuclear and atomic research. For several years he has been engaged in secret Government research activities.

We cannot assume for a moment that we will have an Anglo-American world monopoly on the use of atomic energy for more than a few years. What we can do in three years, others can do in perhaps five or six years.

The process of extracting energy from the atom is in a state of constant flux. Much of our equipment doubtless proceeded from blueprint to obsolescence in three years. So, we can be sure that a much simpler and less costly method of deriving the new power might be discovered at any time.



LATEST IN THE LONG LINE OF AMCOIL LEADERS

CHECK THESE AMCOIL COLD FACTS *with your* JOBBER OR DISTRIBUTOR

1. National advertising plus dealers' sales helps.
2. Advanced design and styling embodying latest refrigeration features.
3. Complete line of cooling units with models and sizes for practically all commercial refrigeration applications.
4. Field tested with consumer acceptance.
5. Highest quality at lowest prices.
6. Shipped complete with mounting brackets and simplified installation instructions.

Write for Complete Sales Portfolio and Location of Nearest Jobber

DEALERS: *Make larger profits selling AMCOIL zero breeze*

This Zero Breeze Low Temperature unit was designed for use where temperatures between + 20°F and – 20°F are required for the better preservation and storage of frozen food products. It is made for wall mounting and so equipped that it may be defrosted (1) manually, (2) semi-automatically, or (3) fully automatic.

NOW—Amcoil Low Temperature Zero Breeze Units have built into them a special device which assures complete defrosting of the cooling coil before the refrigeration cycle is repeated.

Model	BTU/HR 10° MTD	List Price	Model	BTU/HR 10° MTD	List Price
RZB-60	3,900	$325.00	ZB-150	11,000	$615.00
ZB-120	7,250	425.00	ZB-180	14,500	655.00

Amcoil's Exclusive ZB De-Icer and Defrosting System Built In

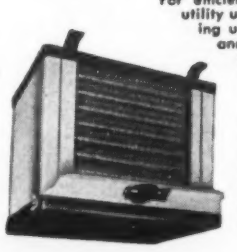
THE BETTER JOBBERS FROM COAST TO COAST
Stock the Complete AMCOIL LINE

DE LUXE FOOD CONDITIONER
A complete refrigeration system, except for condensing unit, which automatically preserves foods without dehydration or shrinkage in Reach-In and Walk-In Coolers.

Model	BTU/HR 15°-MTD	List Price
UDF-39	3,900	$179.00
UDF-49	5,300	199.00
UDF-59	7,500	219.00
UDF-79	10,700	259.00
UDF-129	14,000	374.00
UDF-169	22,000	434.00
FC 50	7,500	333.00
FC 80	11,300	378.00
FC 130	17,000	601.00
FC 160	22,600	641.00

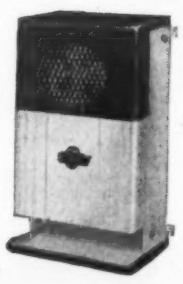
ALSERVICE OPEN-FACE UNIT
For efficient cooling and for general utility use where a forced draft cooling unit is required. Streamlined, and attractively finished in grey and black, it produces temperatures down to 36° F.

Model	BTU/HR 15° MTD	List Price
OC 44	4,000	$120.00
OC 48	5,100	148.00
OC 58	7,500	161.00
OC 84	11,000	210.00
OC 128	15,500	322.00
OC 168	23,000	370.00



ALSERVICE REACH-IN PANEL UNIT
A compact cooling unit for all utility refrigeration applications. Designed to meet a growing demand for medium-capacity units to balance condensing units of ¼, ⅓, ½ or ¾ hp. Especially suited for reach-in and small walk-in boxes where temperatures of 36° F. are required.

Model	BTU/HR 15° MTD	List Price
RI 15	2,000	$94.00
RI 20	3,000	108.00
RI 20S	3,600	129.00
RI 25	2,250	99.00
RI 30	3,000	114.00
RI 40	5,250	149.00
RI 45	6,150	169.00



MANUFACTURER'S REPRESENTATIVES
M. H. McTurk, 3510 Spring Garden Street, Philadelphia, Pa.
J. J. Madden, 212 Madison St., Dedham, Massachusetts
William D. Keefe, Chaffee, New York
E. J. Oliphant & Co., 505 Uhler Bldg., Marion, Ohio
Jordy Engineering Co., Inc., 813 Howard Ave., New Orleans, La.
Robbins-Greenwood Co., 3104 Main St., Houston 4, Texas
Ernest Darwin Corporation, P.O. Box 2654, Charlotte 1, North Carolina

AMCOIL
AC AMERICAN COILS CO.
25-27 LEXINGTON STREET · NEWARK, N. J.

MIDWEST OFFICE:
215 West Ontario Street, Chicago, Illinois

Are you fighting
HIDDEN REFRIGERANT LEAKAGE?

Spot it immediately with
VISOLEAK

Detects even the smallest leaks before they cause serious damage to expensive installations and loss of costly products. Years of use have proven *VISOLEAK* to be dependable, economical, safe and easy to use. See your refrigeration supply jobber or write for complete information.

WESTERN THERMAL EQUIPMENT CO.
[illegible] Angeles Vista Los Angeles 43 Calif.

If Appliance Salesmen Are to Earn More, Their Methods Must Show Improvement

Veterans of the Field Say Need Is For More Sales Presentation Time

By Gerald Eldridge Stedman

In the first article of this series, reporting a somewhat broad study among former salesmen who had gone into the shop for the war period and were determined again to enter the sales field at war's end, I arrived at certain conclusions concerning changes essential in sales compensation.

The fair earning expectancy averages $70 per week with a compensation preference of $25 subsistence salary plus 10% commission predicated upon the delivery of a $450 weekly appliance volume. This assumes a direct merchant risk of 5.5% on salary account, or 45 cents per hour based upon a salesman's 54 hour week.

The salesman assumes 64% of the total risk of attainment and reaches $1.50 per hour of total earnings if he gains the goal that he elects for which he so largely assumes responsibility. This pattern is sound, just, and possible but, as I said, it will require far better *methods engineering* than has been generally used before.

It is the practical improvement in methods engineering concerning personnel screening, training, and sales presentation particularly to accomplish such compensation objectives that forms the subject of this article.

The average salesman, before the war cut off his activities, only spent 28% of his time in the presence of the buyer and was only 17.8% effective in presenting his sales story. By sane improvement in methods engineering, I hope to prove that his earning power can be quadrupled.

Appliance selling is a high art and a great calling, requiring unusual talent and a variety of skills. Just anyone cannot be enlisted. Everyone cannot be permitted to sell. Yet it was more the rule than the exception to hire anyone who came along in the past days when the merchant had no risk and the compensation plan was entirely commission.

My writings and almost continuous research into all matters of pertinent interest in appliance selling during the 1930's, caused me to be in close correspondence touch with many hundreds of them. Seeing the punishing downward drift in their average real earnings, I made studies in compensation and its allied concerns, hoping to suggest improvements in methods engineering to better their performance and therefore their earning power.

In the summer of 1941, I directed a questionnaire study to 3,723 appliance salesmen, all personally known, in the effort to make some reliable deductions of the manner in which they employed their selling time. This is shown subsequently in Table "A." The war came on and it has been useless to publish these findings until now. But, since there is yet no real content of after-war selling effort, these findings are the freshest to be found.

In comparison with this Table "A" is Table "B" which is the estimate of the average time that 423 of these former salesmen, reported in my first article, told me they would allocate to the same sales functions. In each case, I asked for the daily estimate on a basis of minutes. The comparative findings are given in the tables:

Time Better Spent

These tables certainly indicate plenty of opportunity for improvement by better methods engineering. If the actual presentation time of Group "A" can be doubled, and it is apparent that it can by comparison with Group "B," then just from better mechanical disposal of time, the average sales performance can be doubled.

These data provide authoritative bases for a number of detailed conclusions that the reader can use his own ingenuity to interpret. I am trying in this highly compressed series of articles, to flash main ideas; there isn't space to discuss complicated details.

The ability of any sales organization to reach the performance levels worthy of such training, support, and supervision as are involved in the higher sales compensation under discussion starts, naturally, with proper selection.

Selection of Salesmen

The most careful estimates indicate that it costs $150 in expense, time, and effort to bring a salesman up to where he is able properly to sell. If a dud is selected who never will have the abilities to sell, that investment is a throw-away expense. And the merchant has no funds for such unpleasant extravagances.

In former days too often, since commissions alone were paid and essential sales supports were carelessly organized, the merchant could risk taking anyone on . . . but not any more. The very fact that the merchant will pay a subsistence salary to the salesman has a salutary effect in making him more careful of his screening, cautions of enlistment more thorough in training and support.

Shop work and the channeled training of the soldier fall into patterns of repetitive skill and motions that has made possible the development of methods engineering of precise nature in screening aptitudes, abilities, and emotional balances. There are those who feel that such complicated aptitude tests can be employed in selecting sales personnel. I am deeply acquainted with a number of such systems and rule them out of my consideration because they are too complicated, erudite, and academic.

(Concluded on next page)

In the Oct. 8 issue Mr. Stedman, who has devoted nearly 15 years to a study of appliance sales problems, told of his surveys among former appliance salesmen who were holding down War plant jobs, and what they expected in the way of compensation when and if they returned to selling appliances. In a carefully worked out analysis he showed what such men would need and expect in the way of income, and the most suitable way of compensating them.

In this article Mr. Stedman tells how specialty appliance sales organizations and individual salesmen can function more efficiently to achieve greater income by improved *methods engineering*.

How Salesmen Did and Would Use Working Hours

Function	Sales Time of 3,723 Appliance Salesmen Reporting in 1941 — Working Time Per Day In Minutes	Per Cent Total Day's Selling Time	Estimated Sales Time of 423 Former Salesmen Interviewed on Their Shop Job, all Having Reported Intention to Return to Selling — Working Time Per Day In Minutes	Per Cent Total Day's Working Time
STUDYING —Organizing and Planning Day's Work	90	21.2	45	8.6
DEVELOPING PROSPECTS —Contacts by mail, phone, and personal call	150	35.9	180	34.2
ACTUAL PRESENTATION —Of Sales story in front of prospect	120	28.6	270	51.5
DAILY REPORT —Meetings and paper work	60	14.3	30	5.7
Total Minutes in Average Selling Day	420	100	525	100
TOTAL HOURS	7		8.6%	

"Customer Engineering Service"

ASSURES PROPER USE OF

Redmond MICROMOTORS

The Redmond Type "T" totally enclosed shaded pole A.C. Micromotor, illustrated above, has its own enclosed fan cooling system and is built in sizes up to 1/25th horsepower. Below are shown Micromotor applications which are typical of those on which Redmond "Customer Engineering Service" offers valuable assistance for assuring best results.

WE'RE FUSSY about applications. It's a Redmond policy to offer every possible assistance to customers.

Every time a Redmond engineer develops something new for an application, he gains experience for building still better Micromotors. That is why Micromotors are readily adaptable and serve so faithfully in such a wide variety of products.

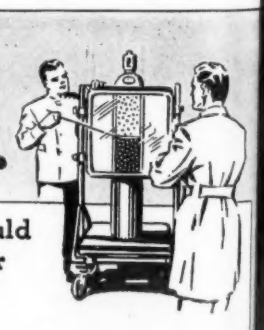
Whenever you have a small motor problem feel free to call on us for *"Customer Engineering Service"*.

Redmond COMPANY, INC.
OWOSSO, MICHIGAN, U. S. A.

REDMOND KNOWS MOTORS — R — REDMOND

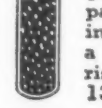
Composite view of Redmond facilities in which more than 2000 people are engaged exclusively in manufacturing Micromotors, Dynamotors, Speed Controllers and Blowers.

Service Engineers Should Know . . .

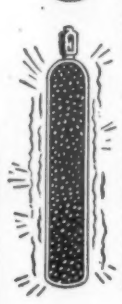


Why: Refrigerant cylinders should never be filled beyond their specific rated capacity.

1. Cylinders of the same water capacity have a different maximum filling capacity for each refrigerant. For instance, a cylinder with a maximum capacity of 5 lb. of SO_2 must not contain more than 3½ lb. of Methyl Chloride. X-Rayed, a properly filled cylinder looks something like this:

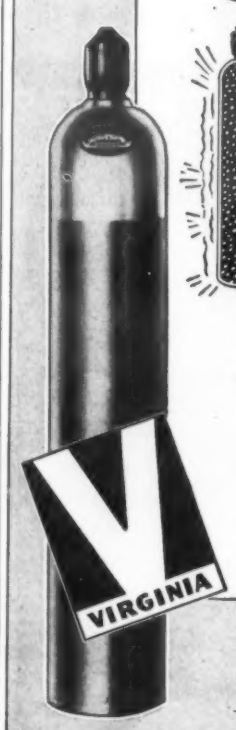


2. The liquid must not completely fill the container when heated to 130° F. The liquid refrigerant will expand about 11% in volume during a temperature rise from 40° to 130° F.



3. If too much refrigerant is put into the cylinder, the liquid expanding under heat may fill the cylinder completely, causing powerful and dangerous hydrostatic pressures.

4. This is what happens when the hydrostatic pressure can no longer be contained — the cylinder explodes violently. Never overfill cylinders; it is dangerous!



Here is a simple illustration of what happens from overfilling. A thermometer works perfectly until the mercury, expanding from heat, hits the top of the tube. And then, pouf! Play safe — don't overfill cylinders!

Manufacturers of
"Virginia" Refrigerants and Agents for Kinetic's "Freon-12" — "Freon-22" — "Freon-11"

VIRGINIA Smelting Co.
WEST NORFOLK, VIRGINIA
76 BEAVER ST., NEW YORK 5 :-: 131 STATE ST., BOSTON 4

Hiring Salesmen By Scoring Them on a '6F' Point System

(Concluded from preceding page)

It isn't a matter of finding personnel that will conform to a formula so much as it is to find a formula that will conform to the innate variations of sales personality.

What screening system can be used?

Let me suggest the "Six-F" method as being sound, swift, sure, and practical. Judge each applicant for a selling position, after a sufficient conversation, on these six "F" factors. I have placed a point weight after each which represents perfection.

In other words, if an applicant shows up who seemed to have balanced perfection in all, the total of the weights would add up to 100. You will have to be your own judge of how far he falls away from perfection and give him his initial percentage score.

If he can score a total of 60 points on your estimate, you can afford to hire him. If he screens less than that in your initial conversation with him, pass him by.

How the System Works

The conversation itself can be pleasant, relaxed, informal, over a luncheon table perhaps. Some of the ratings require only observation. Very few lead questions of a patterned nature are required.

Here, then, is the point system of the "Six-F" method:

	Rate Your Impression Up To Total Points Which Equals Perfection
FORTY	20
FRONT	20
FAITH	20
FACTS	20
FEAR	10
FUN	10
Perfection	100

1. FORTY. The appliance salesman in his forties has a definite advantage over the youngster. His experience, poise, stability, and concentration are better. Usually married and with a family at the age of expanding expense, he feels greater responsibility to his job. His bearing engenders more prospect confidence. His ratio of calls, prospects, and orders per day is higher. He accepts practical training more quickly. He may not make as many movements but more of them count. However, avoid selecting the Brummel type of late forty fop. Such rashed-over sex appeal has no part in selling. Women, who dominate the buying decision for appliances, react to dignity, fatherliness, sincerity, character, and trust.

2. FRONT. This not alone applies to bearing and clothes but to mannerisms and methods of expression. Neatness, orderliness, courtesy, gracious personality, pleasant voice inflections, relaxed atmosphere, earnestness, and sincerity are vital elements of good sales front. None of these should be so noticeable as to appear artificial and put on. The natural goodness of a man, showing forth in pleasant appearance, acts, habits, and voice are the vital values of front.

3. FAITH. Essentially, appliance selling is almost a religion. It requires conviction and zeal. The salesman must have faith in what he is doing, in the product he is selling, in the merchant he works for, and he must have faith in himself. Any appliance delivers a use value greater than its cost. All appliances enrich pleasure, comfort, and convenience, so that the salesman is really a missionary of better living. Most appliances actually save more than their price. The salesman is doing the prospect a favor by persuading her to buy. Through faith, all good sales work is made possible.

4. FACTS. The successful salesman sticks to the truth. He knows his stuff and believes in it. He has product, user, company facts to fortify every point. He resorts to evidence, testimony, demonstration in a rich parade of irrefutable fact. Of course, he won't have the facts when you first interview him. That is your training job. But he must have the inclination and enthusiasm to be analytical, to talk logically from premise to conclusion, to avoid unsupported generalities. Perhaps the best way to judge is to find whether he has the characteristics of an educator . . . for that is what appliance salesmen are.

5. FEAR. It is struggle that drives every man on. There is a bit of worry and concern in the make-up of every successful appliance salesman. That is why he is so attracted by incentives. Too much fear makes a salesman unfit. But just enough, drives him on, keeps him on the solid path, holds him in line.

6. FUN. A happy disposition, the pleasant smile, a hearty laugh are magnetic positives of great persuasive power.

Aptitude Tests No Good

I have closely studied aptitude tests that have gone into such details as the problems of remembering names, faces, and materials studied; tests to measure the ability to convey ideas and word selection; methods to gauge the tendency to become rattled, forget, be flighty, or sarcastic in conversation. Other screening patterns are devised to indicate measurements of enjoyment of home life, work, routine, responsibility, people, leisure time. I count these all as too complicated. Find the man who can score 60 or better on the "Six F's" and if your subsequent training is right, he will prove a good subsistence salary risk.

Wolf & Lacey Elected Officers of Oakland Dealer Association

OAKLAND, Calif.—Guy W. Wolf was elected president-secretary, and Harry C. Lacey was appointed treasurer at the 1945 election of directors of the Appliance Dealers Trade Association held here recently.

The following directors were elected: Max Belling, R. H. Biggs, L. J. Breuner, E. H. Gross, L. W. Hink, L. W. Ling, O. E. Lucas, Fred Maggiora, F. R. McGrew, John Nebeling, J. C. Strohmaier, C. H. Uridge, and Guy W. Wolf.

The original by-laws of the association, as adopted in 1937 and amended at the time of incorporation in 1940, were reaffirmed after some minor changes.

The question of taking deposits against future deliveries of appliances was discussed at the meeting with the members being unanimously opposed to the practice. It was agreed that they would confine their activities to taking names of customers who desired to have their names taken for future notice, but that it was bad business to advertise for and openly solicit names.

Lippert Co. Moves Into New Sioux Falls Offices

SIOUX FALLS, S. D.—L. C. Lippert Co., distributor of Admiral and other lines of appliances, has moved into its new offices and display rooms at 221 S. First Ave., here, announced Leo C. Lippert, owner.

Harold Early, formerly with the Northern States Power Co. here, has joined the Lippert firm as traveling representative.

Peoria-Davenport Office Established by M-H

CHICAGO — Formation of a new branch office, to be known as the Peoria-Davenport Office, has been announced by Fred Kaiser, Chicago regional manager, Minneapolis-Honeywell Regulator Co.

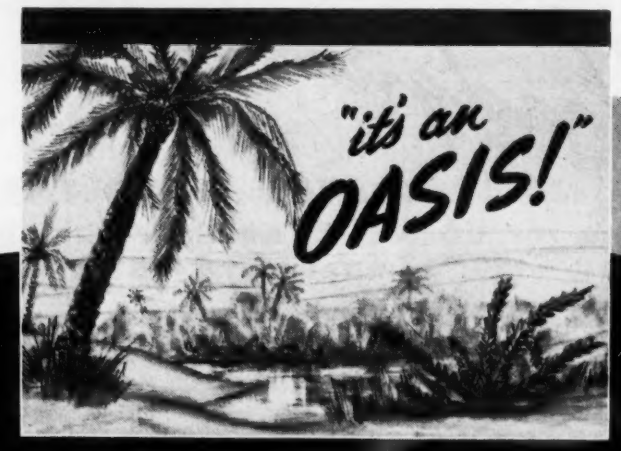
The Peoria-Davenport office will be under the management of Edward Thompson, formerly of the company's Kansas City branch. James F. Wyllie of the Chicago headquarters industrial division has been transferred to Peoria to supervise industrial activities and will assist Mr. Thompson.

William Beale, also of the Chicago office, will be assigned to assist Mr. Thompson and will be located in Davenport, Mr. Kaiser said. With Mr. Beale will be Leland Kuntz, who has been on the Davenport staff, but who has now been made industrial representative.

Lester Hauber Named To Harrison Post

EAST ORANGE, N. J.—Philip H. Harrison, president of Philip H. Harrison & Co. here, distributor of Monitor electrical home appliances, has announced the appointment of Lester A. Hauber as an executive of the concern.

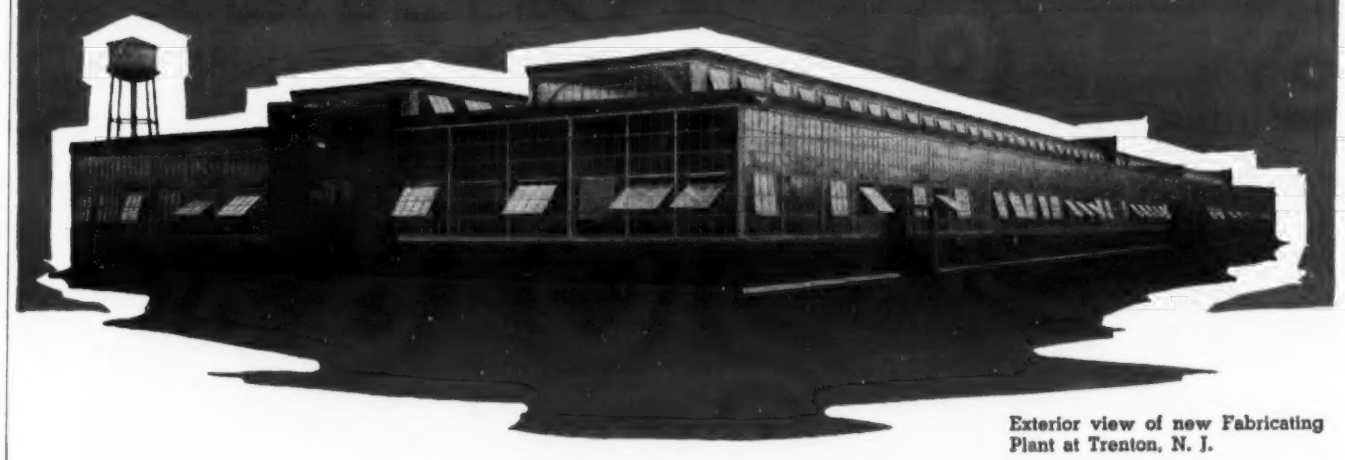
Mr. Hauber was formerly an appliance dealer and for 19 years prior to that was associated with the Retail Credit Co. as manager of its New York office.



The spotlight is on OASIS for drinking water satisfaction and efficient, low-cost operation. Check these important features—space-saving compactness . . . rugged construction . . . trim beauty . . . sanitary splash-free bubbler . . . cushion-mounted super-capacity condenser unit and many others. The OASIS Electric Water Cooler, designed and built by EBCO, pioneers in the water cooler industry for over 20 years, is the answer to the thirst problem!

EBCO
MFG. CO.
401 W. Town St.
Cols. 8, Ohio

PANELYTE ADDS 60,000 MORE SQ. FT. OF MODERN FABRICATING SPACE



Exterior view of new Fabricating Plant at Trenton, N. J.

FUNCTIONAL insulating parts for switches, relays, controls, etc. for the refrigeration industry will be produced in this new building. Our *new* odorless material will be available for manufacturers who want the very *finest* fabricated and punched parts.

For War, Panelyte produced large volumes of intricately fabricated parts...earned and held Army-Navy E awards . . . was assigned an "Approved" Quality Control Rating by the Air Technical Service Command.

The addition of new machinery and machine tools to our existing inventory of equipment will enable us to handle any type of fabricating operation. Deliveries on schedule regardless of quantity involved is one of the reasons for the increased business which necessitated, in turn, this factory expansion.

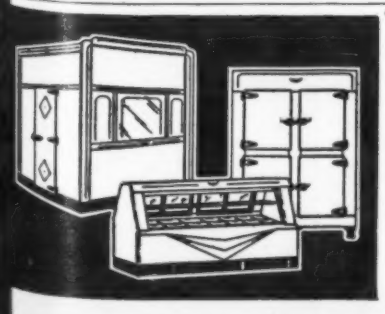
Samples of the material recommended to fit your specific applications will be supplied on request.

PANELYTE *the structural plastic*

PANELYTE DIVISION
ST. REGIS PAPER COMPANY
230 PARK AVENUE
NEW YORK 17, N. Y.

★ MASS PRODUCTION OF SHEETS, RODS, TUBES; MOLDED FORMS, FABRICATED PARTS IN PAPER, FABRIC, FIBRE GLASS, ASBESTOS BASE LAMINATES; DECORATIVE GRADES

Sales Offices: Atlanta, Boston, Chicago, Cincinnati, Cleveland, Dallas, Denver, Detroit, Kansas City, Los Angeles, Nashville, New Orleans, Phoenix, Portland, St. Louis, St. Paul, San Francisco, Seattle, Syracuse, Trenton: Buenos Aires, Johannesburg, Mexico City, Montreal, San Jose, Sao Paulo, Sydney, Toronto, Vancouver.



GET SET WITH FOGEL

INQUIRE NOW ABOUT OUR COMPLETE LINE

INTERESTING PROPOSITION TO QUALIFIED DISTRIBUTORS

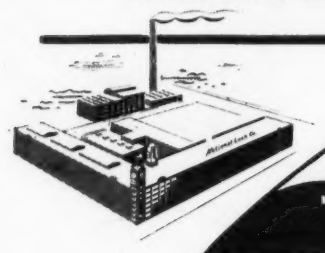
A FEW TERRITORIES STILL AVAILABLE

FOGEL REFRIGERATOR COMPANY
5400 Eadom St., Philadelphia 37, Pa.
Since 1899

Headquarters

REFRIGERATOR HARDWARE
for domestic, commercial and low temperature cabinets

Standard and custom built designs. If you are a manufacturer or jobber, write for our new Refrigerator Hardware Catalog No. R-88.



SURFACE TYPE HARDWARE
"THRU THE DOOR" HARDWARE
EDGE MOUNTED HARDWARE
PLASTICS
DIE CASTING

NATIONAL LOCK COMPANY
Refrigerator Hardware Division
ROCKFORD, ILLINOIS

Here's What To Keep In Mind on the Sale of Commercial Refrigerators

If These Are Covered, Problems Are Fewer

KENDALLVILLE, Ind. — An outline of practical tips for the salesman of commercial refrigeration fixtures was recently prepared by the engineering department of the McCray Refrigerator Co. here, following presentation of a course in refrigeration engineering for the home office workers.

Published in the company's bulletin to its field organization, the outline is intended for the firm's field men, but it could be used by any commercial refrigerator salesman. The outline follows:

I. INSTALLATION

A. How will the fixture go into the store?
1. Through the door.
2. Through a window.

B. Where will the fixture be placed?
1. Floor must be solid.
2. Fixture must be level.
3. Avoid direct rays of sun.
4. Avoid placing fixtures next to hot stoves and hot water pipes.

C. Where will the machine be placed?
1. If air-cooled, is there plenty of ventilation?
2. If water-cooled, is plenty of cool water available?

D. Who pays for wiring?
E. Who pays for plumbing?
F. What is the current supply?
1. AC or DC.
2. 110 or 220 V, or 440 V.
3. Single phase, 2 phase, 3 phase.
4. 60 cy., 50 cy., or 25 cy.
5. Exact voltage.

G. Requirements of the City Code.
1. Is conduit required, etc.

H. How to draw up an installation diagram and make a bill of material.

I. Make sure that installation man tests for leaks, purges air, installs dryer, adjusts switch for proper temperature, tightens packing nuts, etc.

J. If suction pressure averages above 22 lbs. install smaller pulley.

II. TO MINIMIZE SERVICE

A. Instruct customer in use of his new equipment.
1. Keep clean.
2. Avoid overloading equipment by putting in warm products or leaving doors open unnecessarily, unless it was figured to take such extra loads.
3. Oil compressor motor every 30 days.
4. Oil fan motors every 30 days.
5. Do not tinker with mechanism.
6. Have condenser cleaned once a year or oftener if required.
7. See that ventilation around machine is unobstructed.

New Distributing Firm In Phoenix To Handle Commercial Lines

PHOENIX, Ariz.—General Refrigeration Distributors has opened new display and service headquarters occupying 7,500 sq. ft. under roof, with display and office space at the front 50 x 65 ft. at 509 W. Adams St. here.

Wholesale distribution in Arizona and New Mexico has been secured by the company for products of Sherer-Gillett Co., Seeger-Sunbeam, United Refrigerator Mfg. Co., and Milk Producers Equipment Co. The Seeger line includes both domestic and commercial units. Other lines represented include only commercial models.

Irving Druke, president; Hal Symonds, secretary-treasurer; and R. M. Lance, general manager, are officers of the company.

Mr. Druke continues to head the General Insurance & Investment Co., of Phoenix, of which the refrigerator distributing business was opened as a separate division about 18 months ago. It has now been separated and organized as an independent unit.

Mr. Lance came to Phoenix in 1943 with a background of 15 years experience conducting sales and service in the refrigeration business, both commercial and household, in St. Louis.

The company contemplates wholesale distribution of a strong line of radio and a full line of household appliances, both major and minor types, said Mr. Lance.

At ASRE Headquarters

M. C. TURPIN

• • •

Turpin Appointed A.S.R.E. Assistant Secretary

NEW YORK CITY—M. C. Turpin has been appointed assistant secretary of the American Society of Refrigerating Engineers and has assumed his new duties at the A.S.R.E. headquarters here.

Mr. Turpin had previously been with the Westinghouse Electric Corp., since 1928 heading sales of Westinghouse merchandise to the United States government. In 1936-1937 he handled negotiations for and subsequently received orders from the Public Works Administration for 17,000 household refrigerators, said to be the largest individual order ever placed up to that time by a user. Prior to that he had done sales promotion work and publicity for Westinghouse. He has a degree in electrical engineering from Alabama Polytechnic Institute.

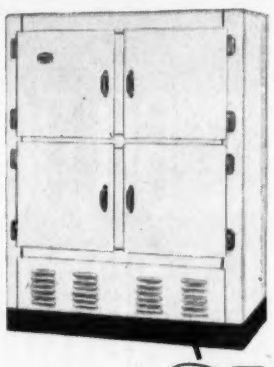
Mr. Turpin was a charter member and subsequently chairman of the Baltimore-Washington section of the American Society of Refrigerating Engineers. He is also a past president of the Electric Institute of Washington.

Weis To Distribute G-E Commercial in St. Louis

ST. LOUIS—Henry Weis, Jr. & Co. has been appointed distributor of General Electric commercial refrigeration for this city and adjoining Missouri and Illinois areas. Business will be conducted in the firm's new office, sales, and service quarters at 1919 Washington Ave. here.

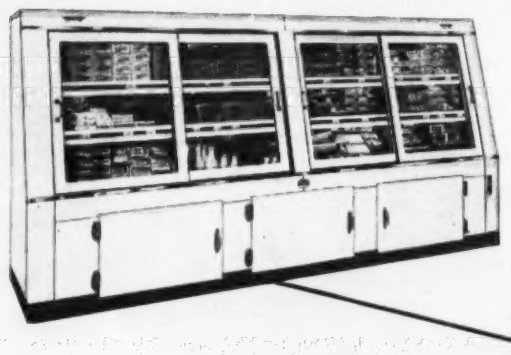
Heading this newly organized firm is Henry Weis, formerly manager of James & Co., Inc., prior to that firm's withdrawal as G.E. commercial refrigeration distributor with the advent of war.

Key sales and service personnel of the former distributorship have been retained by Mr. Weiss.

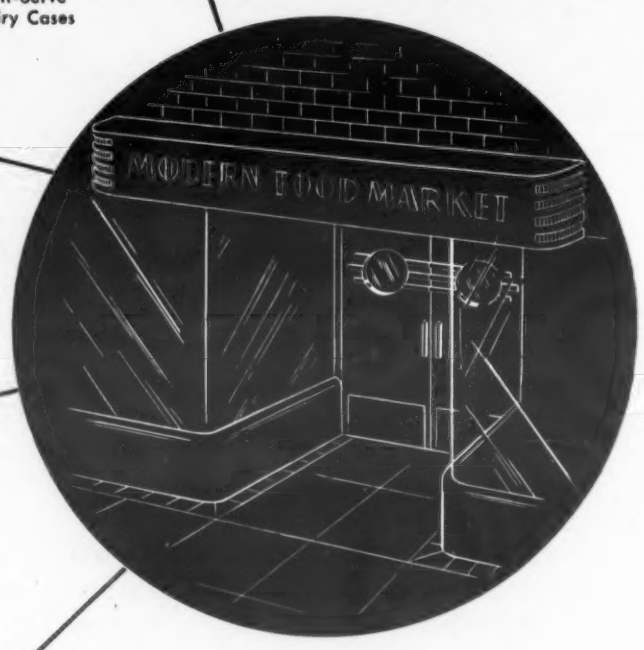


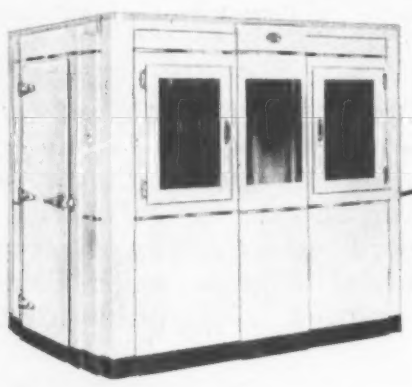
Reach-in Refrigerators

SHERER
OFFERS MODERN REFRIGERATED DISPLAY FOR FOOD MARKETS IN YOUR COMMUNITY!

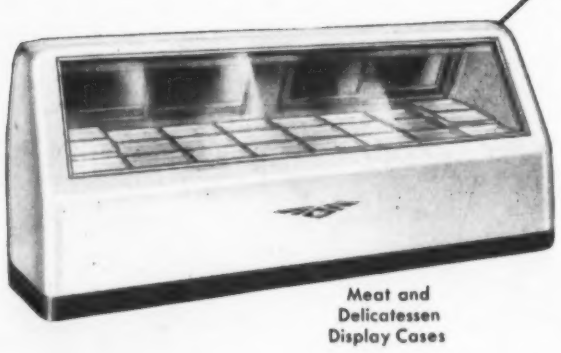


Self-Serve Dairy Cases





Walk-in Cooling Rooms



Meat and Delicatessen Display Cases

Very soon now there will be enough Sherer refrigerators for every modern food market. When that time comes Sherer distributors are assured of a full line, of finest quality, at prices that will bring them VOLUME and PROFITS!

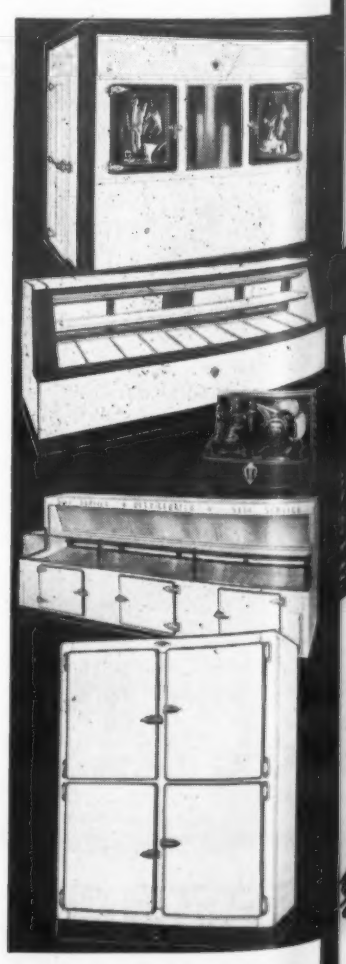
Smart are the distributors who go ahead with Sherer. They know that Sherer's refrigerator display equipment is the best to be had—designed for the job, efficient in performance, economical in operation . . . a line they can be proud to represent in their community.

SHERER
REFRIGERATOR PRODUCTS
SHERER-GILLETT CO., Marshall, Mich.

HUSSMANN
REFRIGERATION
EQUIPMENT
FOR
MORE SATISFACTION
AND EFFICIENCY

HUSSMANN Refrigeration Equipment proves itself in use—so one installation sells another. HUSSMANN Quality—HUSSMANN Dependability—HUSSMANN Leadership all combine to build goodwill and increased volume. Write for more facts today.

HUSSMANN
REFRIGERATION, INC.
HUSSMANN BLDG. • ST. LOUIS 6, MO.



Promoted by Admiral

HAROLD D. CONKLIN

Formerly manager of Admiral Corp.'s electric range division, he was recently made manager of the entire appliance division.

Selma Andrews Becomes Crosley Home Economist

CINCINNATI — Mrs. Selma M. Andrews has been appointed home economist in the manufacturing division of Crosley Corp.

For the past four years, Mrs. Andrews has been serving as home service director for the Bluefield division of the Appalachian Electric Power Co. in Bluefield, W. Va. Previously, she had been director of the Roanoke Dairy Council, in Roanoke, Va., which was affiliated with The National Dairy Council of Chicago.

Previous to that, she had served as district home economist for the Appalachian Electric Power Co.

In 1944, she became a member of the Home Service committee of the Edison Electric Institute.

She is a member of the American Home Economics Association and the "Home Economist In Business" group. In 1944 and '45, she was first vice president of the Virginia Home Economics Association.

Mrs. Andrews attended Madison College at Harrisonburg, Va.

To Design Freezers

CARL C. WHITCOMB

Has joined Schelm Brothers, home freezer manufacturer, as design and development engineer.

Meagher & Whitcomb Join Schelm Bros.

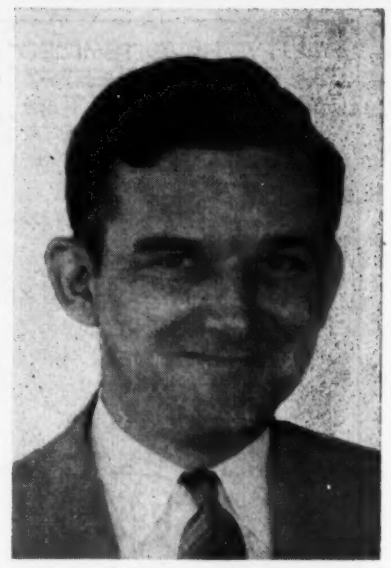
EAST PEORIA, Ill.—Appointment of two industrial specialists to the staff of Schelm Brothers, Inc., here, has been announced by W. H. Schelm, president.

These men, who will direct various phases in the manufacture of the new Schelm line of "Polar Freez" cold storage food cabinets for home and commercial use, attic fans, and air conditioning units, are William D. Meagher, factory superintendent, and Carl C. Whitcomb, design and development engineer.

Mr. Meagher, with a background of 17 years in the sheet metal fabrication field—comes to Schelm Brothers, Inc., for Operadio Mfg. Co. of St. Charles, Ill., where for the past three years he has served as plant superintendent. Previously he was with U. S. Navy Engineering Corps.

Mr. Whitcomb comes to Schelm from Commercial Solvents Corp. of Peoria, where he spent the past 15 years in various engineering capacities.

Heads Freezer Plant



WILLIAM D. MEAGHER

Formerly with Operadio Mfg. Co., he has been appointed factory superintendent for Schelm Brothers.

Westinghouse Appoints Vining as Consultant

MANSFIELD, Ohio—The appointment of Vernon E. (Sam) Vining, nationally known retail merchandise selling authority, as appliance merchandise consultant for the Westinghouse Electric Appliance Division has been announced by T. J. Newcomb, sales manager.

Mr. Vining is widely known in the electrical appliance field as a consultant, author, and speaker. During the war, he has worked as a consultant to the U. S. Treasury in the sale of war bonds and developed the famous Shangri-La flat top war stamp campaign. His war bond radio broadcasts entitled, "Helen and I," were run on nearly 100 stations.

"The services of Mr. Vining have been retained by Westinghouse," Mr. Newcomb said, "as part of the postwar Westinghouse appliance sales program to utilize the aid of specialists in the appliance field.

"Mr. Vining will consult with us on all merchandising, advertising, sales promotion, and sales training activities. Because of his long study and close work with retail appliance salesmen, Mr. Vining will be of invaluable assistance in the development of materials that fill the needs of salesmen."

During his assignment with the Treasury, Mr. Vining continued his work with private industries as well as his work as a speaker and writer. He is now a $1 a year man for the Treasury. He was with Westinghouse from 1933 to 1940.

Gilmer BELTS

Gilmer V-Belts have every quality your customers want. They are ruggedly built with low stretch cords, fit accurately, give efficient service. And they're made on the largest assortment of V-moulds in the world.

Gilmer V-Belts assure quick, easy sales and steady year round business. The demand now is greater than it has ever been before. Get in touch with your jobber today.

L. H. GILMER COMPANY
Tacony, Philadelphia 35, Pa.
Division of United States Rubber Company

How "Freon-22" helped increase penicillin production

● When life-saving penicillin was evaluated, Army needs exceeded capacity to produce it.

At Commercial Solvents Corp.'s plant, Terre Haute, Ind., the wet method of freezing penicillin, originally installed, created a production "bottleneck." The process was a slow one. To speed up freezing operations, designers turned to "Freon-22."

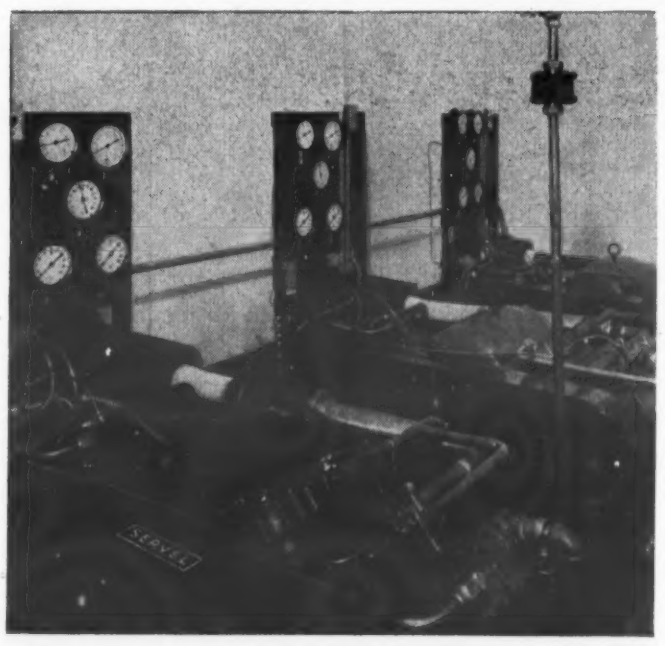
Freezer cabinets, resembling huge ice-cube makers, were specially designed to freeze up to 6000 vials of the curative drug. Each cabinet was built to accommodate copper trays that hold 166 twenty-c.c. vials of liquid penicillin concentrate. Three Servel two-stage condensing units using "Freon-22" exclusively provide the refrigeration and maintain the required sub-zero temperature.

The "bottleneck" was eliminated. Demands were met. Now, an average of 90 billion Oxford Units of penicillin can be produced by Commercial Solvents each month . . . more than four times the entire U.S. output in 1943! The dry method forestalls frostbitten fingers from contact with trays. And, objectionable carry-over of volatile "brine" into a vacuum desiccator has been entirely eliminated.

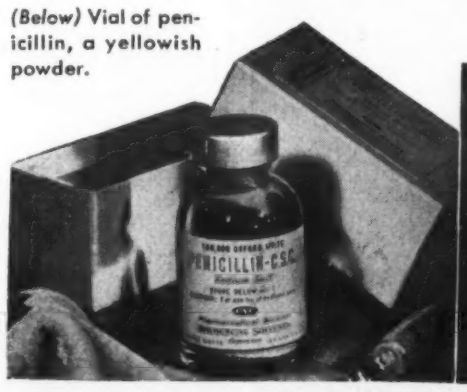
Of course, freezing installations for the production of penicillin aren't an everyday job. But wherever low temperature refrigeration is required, engineers are turning to "Freon-22." This non-toxic, non-flammable refrigerant is now serving scores of industries. Complete data will be sent upon request. Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington 98, Delaware.

(Above) Attendants placing trays of life-saving penicillin in freezing cabinets.

(Below) The Servel two-stage condensing unit installation. Plant engineered by E. B. Badger & Sons Co.; Cabinet installations by Ideal Cooler Co., St. Louis, Mo.



(Below) Vial of penicillin, a yellowish powder.



KINETIC
FREON
REG. U. S. PAT. OFF.
safe refrigerants
"Freon" is Kinetic's registered trade mark for its fluorine refrigerants and propellents.

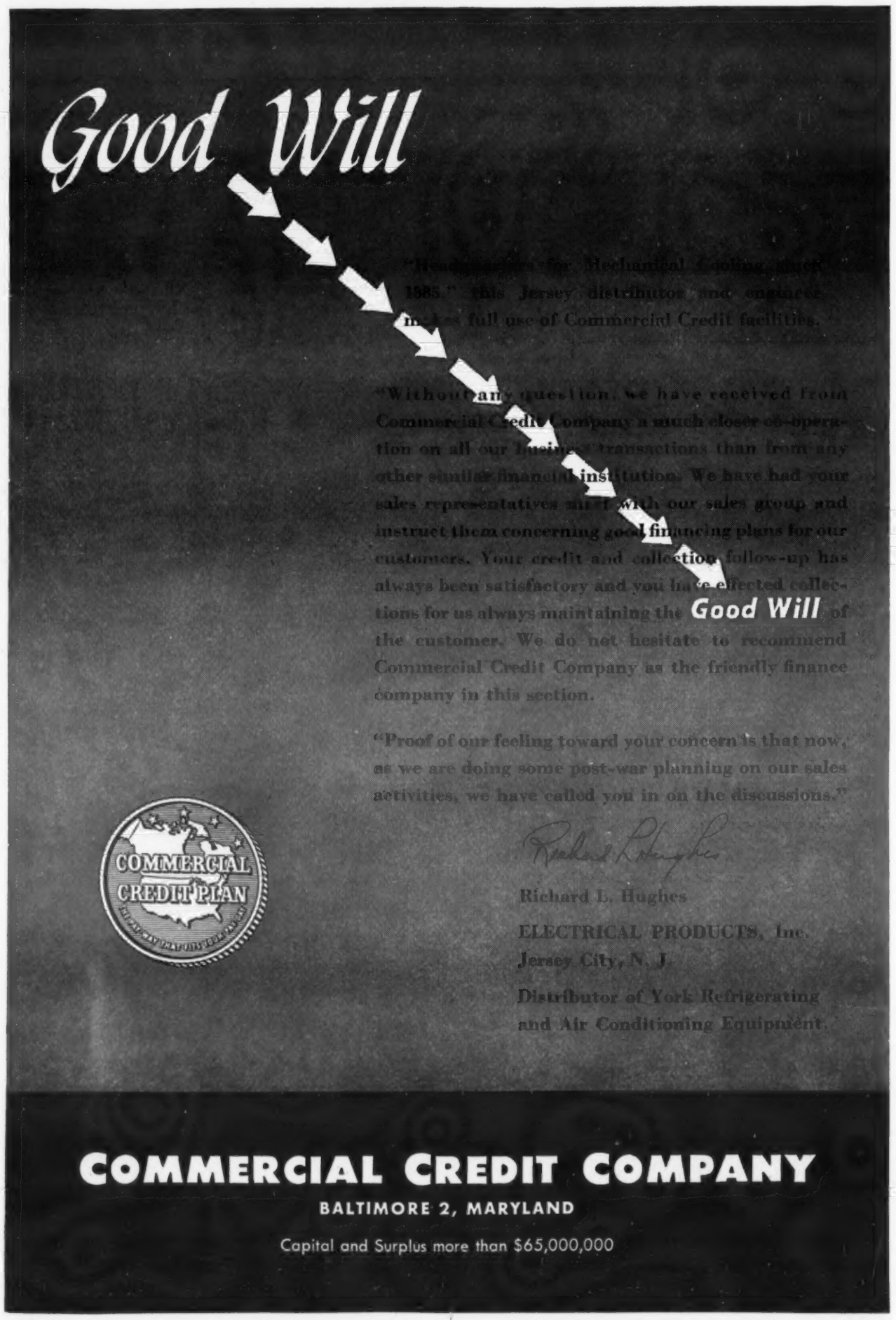
IMPORTANT

"Freon-22" and "Freon-12" are now available in any quantity for low temperature refrigeration.

They'll Do It Every Time . . . . By Jimmy Hatlo

BUT I HAVE ITEMIZED THE EXPENSE SHEET AS BEST I CAN-TAKE THIS "INCIDENTALS," F'RINSTANCE- I CAN'T PUT DOWN THAT I HAD TO BRIBE THE CUSTOMER'S SECRETARY WITH NYLONS AND THEATRE TICKETS TO GET AN APPOINTMENT- THAT'S HOW I PUT THE DEAL OVER. YOU KNOW HOW IT IS...
IT'S GONNA TAKE LOTS OF EXPLAINING TO WHITEWASH THAT SWINDLESHEET. GLIB OUGHT TO BE WRITING GHOST STORIES-
THAT THEATRE TICKET GAG IS GOOD! WHEN HE'S SUPPOSED TO BE SEEING CUSTOMERS, HE'S SEEING TWO-BIT DOUBLE FEATURES
NO, I DON'T KNOW HOW IT IS... EXPLAIN IT TO ME, GLIBLEY-
HE PUTS IN BIG HOTEL BILLS, BUT WHEN I WAS OUT OF TOWN ON VACATION I SAW HIM IN A TRAILER CAMP...
YOU CAN'T KID THE OLD BOY. HE WAS A FAST MAN WITH A SWINDLE SHEET, HIMSELF, IN THE OLD DAYS-
TRYING TO EXPLAIN A TOP-HEAVY EXPENSE ACCOUNT. THEY'LL DO IT EVERY TIME— THANX TO F. J. McM. PHILADELPHIA, PA.
Copr. 1944, King Features Syndicate, Inc., World rights reserved.
2-18

Buy and Buy - - More War Bonds



Trade Mark registered U. S. Patent Office; Est. 1926

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

AIR CONDITIONING AND REFRIGERATION News

BUSINESS NEWS PUBLISHING COMPANY • 5229 CASS AVENUE, DETROIT 2, MICHIGAN

Copyright, 1945, Business News Publishing Co.

F. M. COCKRELL, *Founder*

Published Every Monday by BUSINESS NEWS PUBLISHING CO. 5229 Cass Ave., Detroit 2, Mich. Telephone Columbia 4242.

Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: $4.00 per year; 2 years for $7.00. All other foreign countries: $6.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Send remittance with order.

GEORGE F. TAUBENECK
Editor and Publisher

PHIL B. REDEKER, *Managing Editor*

C. DALE MERICLE, *Assistant Editor*
ROSS H. POTTER, *Assistant Editor*
Editorial Assistants: BARBARA LEE, MARCELLA PRICE, FRANCES WEED, AND LORRAINE NcNINCH.

ELIZABETH SMITH, *Assistant Bus. Mgr.*
MACIL STEPHENS, *Asst. Adv. Mgr.*
HELEN C. HENDERSON, *Credit Manager*
RUTH RICHARDSON, *Subscription Mgr.*

On leave of absence to serve our country:
U. S. Army: JACK SWEET, GEORGE L. COLLINS, GEORGE M. HANNING, AND HUGH T. MAHAR. *U. S. Navy:* ROBERT P. NIXON, ED HENDERSON, JOHN R. ADAMS, AND ANDREW GANTT. *U. S. Marine Corps:* PAUL R. PARK. *U. S. Army Air Forces:* JIM McCALLUM, GEORGE WATKINS, AND WILLIAM WALTER. *U. S. Coast Guard:* MERTON GLUTTING. *Waves:* MARGARET MARR AND LYNDON JANE BRODE.

Member, Audit Bureau of Circulations. Member, Associated Business Papers.

VOLUME 46, No. 8, SERIAL No. 866, OCTOBER 22, 1945

How to Make A Million Dollars

THERE'S an old saying to the effect that if anybody knows how to make a million dollars, he never writes about it—he *reserves* the knowledge for himself and his posterity.

Well, this department here and now is going to disprove that old saying. Why are we going to divulge this priceless idea—for free? As you may have guessed already, it's because there is a "catch" to it.

The "catch" is:

You have to have half a million bucks to start with before you can do anything with this idea.

So, now that most of our readers have left us at this point to take another look at the cartoon on this page, we'll proceed to reveal the idea. Here it is:

DEMAND FOR SMALL REFRIGERATION CONDENSING UNITS IS STAGGERING

Go into the business of manufacturing fractional horsepower refrigeration condensing units.

Don't worry about finding customers. This office can drop into your lap orders for at least 300,000, and possibly 500,000 units—right off the bat—with more coming. (That is, if you hurry.)

The situation is this:

Those few independent manufacturers of fractional horsepower condensing units now in existence are so swamped with orders from their old customers that most of them don't see how they can meet considerably enlarged production schedules which those orders will entail.

What about all the newcomers? There you have it: your opportunity. They are knocking on the doors, hat in hand, of existing sources of supply. To their pleas the manufacturers are deaf. They go away empty-handed.

It should be noted that it's *hermetically sealed* condensing units that most of these newcomers want. And that brings up another opportunity to make a million dollars:

Build hermetic motor components.

GREAT NEED FOR HERMETIC MOTORS, TOO

Sources of supply for *hermetic* motors are swamped, also.

Capacity for manufacturing fractional horsepower motors has been expanded enormously during the war, to be sure. But the hermetic motor is something else. To get into that game considerable re-tooling must be done. So far, any newcomers to this field haven't raised their heads.

It's an odd fact that these two shortages (bottlenecks we used to call 'em) may prevent scores of ambitious neophyte manufacturers from taking a whirl in the household refrigerator, home freezer, and portable air conditioner fields.

In the long run, that may be a good thing for the industry. Only time can tell.

"WHEN A JOB CALLS FOR MORE THAN ONE EVAPORATOR ON A SINGLE UNIT . . . .

I call for an A-P MODEL 235 Suction Pressure Valve . . . It's a good feeling to know what a Valve can do . . . *and I know!* . . ."

THAT is the comment from a Refrigeration Service Engineer when we asked him regarding his personal experience with "A-P" Valves.

Confidence like this is based on practical, day-in day-out experience in maintaining the nation's refrigerating machinery in spite of today's difficulties and handicaps. It is a trust shared by a widespread army of refrigeration service engineers who know that dependable "A-P" Controls, Valves, and Solenoids save them time-wasting call-backs — insure *customer satisfaction.*

A-P has cracked some hard nuts in the way of refrigeration servicing problems. Always feel free to consult us about yours!

AUTOMATIC PRODUCTS COMPANY

2450 NORTH THIRTY-SECOND STREET MILWAUKEE 10, WISCONSIN

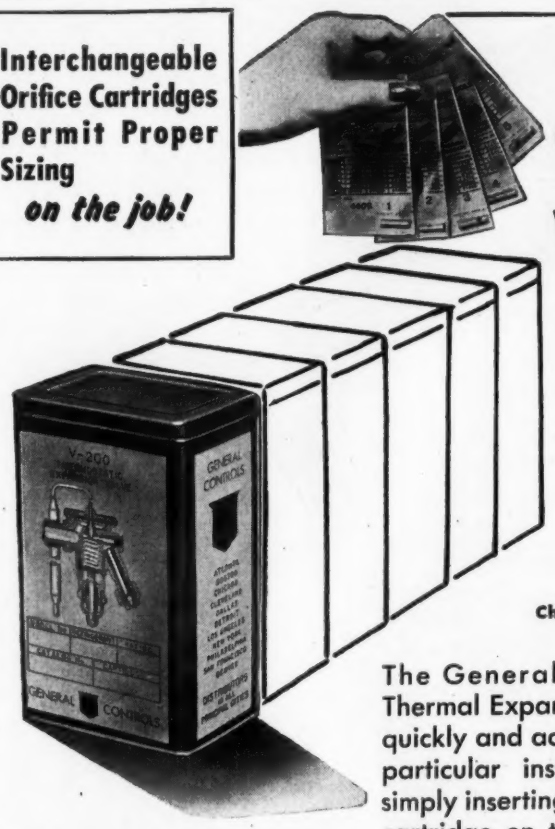
Export Department — 13 East 40th Street, New York 16, New York

Illustrated Bulletins and full information sent upon your request.

A-P DEPENDABLE *Refrigerant Valves*

STOCKED AND SOLD BY REFRIGERATION JOBBERS EVERYWHERE . . . USED AND RECOMMENDED BY REFRIGERATION SERVICE ENGINEERS

Interchangeable Orifice Cartridges Permit Proper Sizing *on the job!*



GENERAL CONTROLS

V-200

THERMAL EXPANSION VALVE

For Freon Methyl Chloride Sulphur Dioxide

The General Controls V-200 Thermal Expansion Valve can be quickly and accurately sized to a particular installation load by simply inserting the proper orifice cartridge on the job. This eliminates the costly necessity of carrying a large stock of complete valves of different capacities.

For complete specifications on the V-200 and other refrigerant controls, write the nearest Factory Branch, Distributor, or direct to

GENERAL CONTROLS
801 ALLEN AVENUE GLENDALE 1, CALIF.

Factory Branches: Philadelphia, Atlanta, Boston, Chicago, Kansas City, New York, Dallas, Denver, Detroit, Cleveland, Houston, San Francisco, Seattle, Pittsburgh. *Distributors in Principal Cities*

Activities of Philadelphia Group Cited To Show How 'Leagues' Help Industry

By Ross Potter

BOSTON—More than 650 members and guests of the newly formed Electric Institute of Boston, Inc., heard John A. Morrison outline the steps through which the Electrical Association of Philadelphia, one of the most successful in the country, is doing its job.

The meeting took place recently at Boston's Statler hotel, and marked the Institute's first major activity.

A veteran of 27 years' experience in institute and trade association work, Mr. Morrison was able to give a brief, informal review in a series of first hand illustrations of how various groups in the industry can capitalize on opportunities ahead.

TWO JOBS TO DO

Any trade association has two jobs to keep constantly in mind as far as relations with the public are concerned, he said: to keep the public thoroughly informed on the association's activities, and to promote and sell the electrical industry steadily with the public.

Within the association itself, he continued, four fundamentals should be followed:

1. All groups should be represented —contractors, dealers, distributors, manufacturers, and utilities.

2. The individual representative for each should be the active head of the company, for he knows the most and can act the most quickly and surely.

3. An effective association, bringing its members together, can unite their competitive drive against outside competition instead of against each other.

4. Do everything possible for your members, but don't deal yourself in on their prices or labor disputes. Those things, frankly, are not your business.

He was going to go into some details on the Electrical Association of Philadelphia, Mr. Morrison said—not to show off whatever accomplishments they had gained, but to illustrate the different directions in which a strong association can be effective.

The Philadelphia league was formed in 1917, he outlined. Since that time its activities have projected dealer shows, refrigeration shows, all-electric kitchen shows, automatic oil heating shows, television exhibits, roaster campaigns, and many more.

ASSOCIATION ACTIVITIES

He outlined briefly the dates of organization for these activities, how they increased in size, how they consolidated their efforts when combination promised better business—as in the all-electric kitchen campaigns—and how they tied in with other public activities.

The roaster demonstrations, he illustrated, were given in Philadelphia's theaters as part of matinee performances. All media of public advertising were used—radio, direct mail, newspapers, and car cards.

Entertainment projects served periodically to keep the members in contact with each other—golf tournaments, picnics, bowling parties, Christmas open house at the Association's headquarters, leaving out speeches or any special events but serving refreshments and a place to sit down and relax in between times.

The Association's wartime activities worked toward maintenance and repair of all the kinds of electrical equipment that wouldn't be replaceable until after the war, Mr. Morrison explained.

"Extra care means extra wear" was the motto behind which a million and a half appliance repairs were made in Philadelphia in 1942, he reported.

"Our talks stressed the idea that good appliances were worth saving," he said. "We asked people to help us help them."

Refrigeration outlets began to be in bad shape before the end of that year, he continued. Plenty of the experienced men were going into the army. The ones left had to cover a lot more ground. And they had trouble getting the gas they needed.

HELPED GET GAS

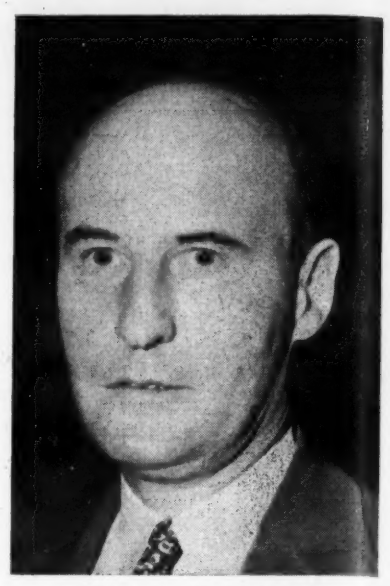
"Our solution was to get top refrigeration service men and OPA representatives together. The repairmen brought a map of the city, figures on the number of domestic and commercial systems that would have to be kept going, and figures on the number of trained and untrained repairmen available.

"The facts were convincing. Local OPA boards allotted each refrigeration service man 1,800 miles' worth of gas throughout that winter, and 2,000 miles during the summer that followed."

The industry's good faith was evidenced by the Association's efforts to get a refrigeration training course under way. Through the help of the city's board of education, classes in refrigeration, oil heating, and a refresher course in the care of all appliances, were set up.

"When it came to getting help on oil rationing, the procedure was already established. The final agreement was worked out without friction.

He Told Them How



JOHN A. MORRISON
Managing director of the Electrical Association of Philadelphia.

"Again, it was not what we did that makes this important," Mr. Morrison emphasized. "That's all past history. The important angle is what a strong trade association *can* do."

He went on to describe the "Octopus Outlet" campaign that was begun last year. The term described a graphic symbol of inadequate wiring in the home—a multiple plug stuck into a wall outlet, sprouting seven or eight electrical lead cords.

The campaign again used all public advertising facilities — Philadelphia's four dailies, the radio, and car cards for the city's 3,500 street cars, carrying 90 million riders a month.

WORK ON WIRING

Public recognition and insistence on adequate wiring standards has been pushed throughout the campaign and pointed toward postwar building, he said. Builders and architects are more influenced by buyers' requests than by any other appeal. The idea has to be sold first to the public.

The banks were brought into the picture through pointing out to them the close relationship between adequate wiring and the banks' loans for home modernization and appliance sales.

A cooperative project was worked out whereby folders in color were printed, emphasizing the necessity for adequate wiring wherever improved homes or new appliances are being planned, and mailed out with the bank's statements.

Cost of the folders is divided evenly between the bank and the Association, and the bank's name appears on the reverse side of the folder, pointing up the loans available.

EFFECTIVE ADVERTISING

The Association's electrical contractor and dealer members, on the other hand, can see effective advertising for their products going to a highly desirable group of people—people with bank accounts!

(John Morrison made very casual mention of the banks' adoption of this idea, but working out the plan and selling it to Philadelphia's bankers was one of the industry's outstanding promotional jobs in 1944, and entirely his own.)

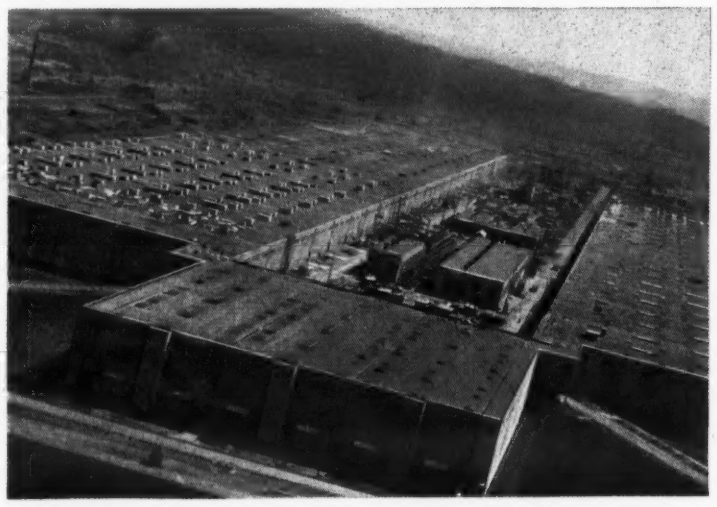
Meanwhile the league is readying its prewar activities for the return of the war's veterans. Three vocational classes were all set to begin Sept. 24, with two more to follow in the near future.

SPECIALIZATION Pays Off

WHEREVER PEOPLE ASSEMBLE, or are employed, the providing of a source of cool, refreshing drinking-water is now recognized as basic. Sunroc Water Coolers were designed to fill this universal need. They *are* supplying it, from coast to coast.

Sunroc did not wait for post-war to break into the national picture. Its highly perfected line . . . result of years of concentration on the development of one product . . . was ready. Its far-flung dealer-organization is functioning smoothly, backed to the hilt by full factory-promotional, sales, and service assistance . . . including national and local advertising, field and factory cooperation, and a simple financing-plan.

In this fresh and relatively uncultivated market, a Sunroc dealer-franchise offers a most attractive prospect . . . a real plum which may be yours for the plucking. Mail us the coupon for full details; they will be promptly forthcoming from our regional distributor. Sunroc Refrigeration Company, Glen Riddle, Pa.



SUNROC'S PART IN "MANHATTAN PROJECT"

On Sunday, August 5, 1945, the first atomic bomb was dropped on Japan. Though first utilized for war, the harnessing of atomic energy holds untold possibilities for the progress of mankind.

For years, thousands toiled in secret plants, such as the one of the Clinton Engineering Works, at Oak Ridge, Tenn., shown above. As they worked on "Manhattan Project" . . . key-name given to the war's most sensational secret weapon . . . they were surrounded by every possible safeguard. Everything was provided for their comfort, convenience, and morale . . . including cool drinking-water.

Sunroc, specializing in water coolers alone, has tailored its product to this need for good water . . . as business, industry, and the Government well know and appreciate. For full information about Sunroc, and the Sunroc models now available, write Dep't I-10, Sunroc Refrigeration Company, Glen Riddle, Pa.

"There's nothing like a cool drink of water!"

"There's nothing like a cool drink of water!"

SUNROC
Water Coolers
GLEN RIDDLE, PA.

SUNROC REFRIGERATION COMPANY
Glen Riddle, Pa.

Gentlemen:
Please tell me how I can get a Sunroc Water Cooler franchise. Send me your free brochure: "One Product, One Price, One Policy."

Name_____
Street_____
City and State_____
I am now / am not a water cooler dealer / distributor

ACRN-10

. . . . MODERN EFFICIENT ECONOMICAL REFRIGERATION

DOLE Vacuum COLD PLATES
Maximum Refrigeration Efficiency
for all REFRIGERATION PURPOSES

DOLE
Largest Manufacturers of Plate Type Evaporators

REFRIGERATING COMPANY
5910 North Pulaski Road, Chicago 30, Illinois
New York Branch 103 Park Avenue, New York 17, N. Y.

Specialized Army Training Fits Many Veterans for Appliance Jobs

Every employer wants to hire war veterans, partly because the veterans have most certainly earned the right to a job, and partly because employers realize that here is the answer to some of their manpower problems. The variety of experience which men and women in the service have obtained should make them better qualified as workers, employers also believe. Many of the veterans have had training which will help fit them into jobs, particularly in the appliance field. On this and the following two pages the NEWS presents two articles which it feels will help both the employer and the veteran in placing the right man in the right job.

MOS (Military Occupational Specialty) Can Guide Employer In Picking His Men

By Sgt. Ernest W. Fair

"Veterans will make good electrical refrigeration industry workers . . . their experiences in the service have been such as to fit them readily to these civilian jobs!"

Doesn't sound quite right, does it? The truth is that the statement cannot stand up when applied to any and all veterans; but it is more than true when applied to certain groups of ex-servicemen. These men have received specific and specialized training that will fit them to these jobs like kid gloves fit to one's hands.

UNPRECEDENTED TRAINING

Never before in the history of warfare was the average soldier given as much and as thorough training as he received in this war; the army had no other choice . . . it had to train thousands and thousands of specialists and it had to train every last man in certain fundamental mechanical principles . . . else we would have lost this war!

There have, of course, been many cases of stupidity in the Army's training program but for every soldier who was inadequately trained to do his job there were a thousand trained to do it right.

All of this training can be utilized by every employer within the vast electric refrigeration industry whether his be a small or large institution; retailer, wholesaler, or manufacturer.

The writer, by the fortunate nature of the Army jobs assigned him both in the U.S.A. and abroad in combat, has had ample opportunity to see the results of this training in action and to know that it has not been wasted and that today's veterans are better trained to hold jobs in the electric refrigeration industry than ever before.

Naturally not every veteran is so readily adjustable to a job in the industry. The key to the selection of just the right man is there, however. In the paragraphs to follow are summarized just who these men are, what they did in the Army, and what training they have received.

For our purposes the veteran's Army experience and training that has been such as to make him readily adaptable to work in our field is given herewith. Men who have worked along lines which make them easily adapted to work in the electric refrigeration industry are listed.

By their MOS's you shall know them!

For the uninitiated, a MOS is a soldier's Military Occupational Specialty or, in plain words, the job he did while in the service. Every man received such a rating sooner or later.

There is, for example, the rifleman (745) whose training embraced considerable familiarity with mechanical arms, their repair and maintenance, the use of small tools, and a great deal of experience with smaller pieces of all sorts of mechanical equipment.

There are the 405's, 055's, 390's, and 502's, whose work was that of a clerical nature and whose experiences in the Army were of such a nature as to make them easily adaptable to work in our industry in a number of different spots in every kind of institution within the industry.

VARIETY OF JOBS

In general, the man who did work of several kinds is, by the nature of the experience he has acquired, able to step more readily into certain jobs within the industry, than others. In the paragraphs to follow are listed those who can most readily and speedily be adjusted to jobs not only in the factory, the repair shop, the salesroom but in the office as well. In some instances their training and work has been so similiar to what they will do in our business's that little more needs to be learned by the veteran other than those changes he must make from the Army way of doing things to the civilian way.

Here are the MOS's of interest to the electric refrigeration industry in all of its branches:

Airplane Maintenance Chief (750)—Supervised the inspection, maintenance, and repair of aircraft and aircraft equipment and did such work as to make his skills usable in factory or repair shops. Has experience in keeping of shop records. Has completed a course in aircraft maintenance at an Army school.

Airplane Power Plant Specialist (684)—Did highly specialized maintenance and repair work on aircraft power plants and by the nature of his experience along this line readily suitable for factory or repair shop work. Familiar with the use of all small tools and testing equipment and has received a course in airplane power plant maintenance in an Army school.

Airplane Sheet Metal Worker (555)—Adaptability same as the two foregoing. In the Army repaired damaged sheet metal surfaces and light metal fittings of airplanes, assisted in repairing leaks on airplane radiators and has completed a sheet metal maintenance course at an Army school.

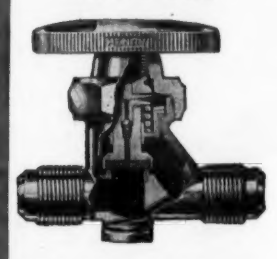
Electric Motor Repairman (304)—Installed, inspected, tested, and repaired electric motors and accessory equipment. Tested and repaired armatures and coils. Refaced commutators, repaired starting devices and switches. Familiar with the use of all small hand tools. Had to understand the theory of electric motors, including design, construction, and operation. Sometimes has completed a course in electrical repair work at an Army school.

Fire Control Electrician (633)—Maintained antiaircraft fire control equipment including directors and data transmission systems, and height finders. Inspected and supervised the maintenance of other electrical equipment in the AAA battery.

(Continued on next page)

HENRY

TYPE 625



Balanced-Action Diaphragm Packless Valve

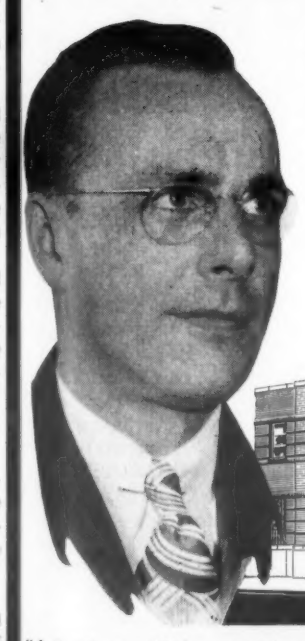
The only packless valve that gives you 24 important features of design, construction and operation—all described in catalog No. 96. It's yours for the asking.

LEAK PROOF • PORTS IN LINE • LONGER LIFE • OVAL HAND WHEEL

HENRY VALVE CO. 1019 N. SPAULDING AVE. CHICAGO

ASK YOUR JOBBER

FROM THE REFRIGERATION SERVICE CONTRACTOR'S ANGLE



Mr. WARREN W. FARR, of Refrigeration Maintenance Corporation, Cleveland, says—

"A QUALITY MATERIAL ALWAYS HELPS OUR BUSINESS FORGE AHEAD!"

"A business like ours rises or falls on the skill of our men and the type of materials we use. The removal of moisture is only half of our work, because moisture removal is only half of the job . . . other elements must be removed, too. And there is where Davison's Silica Gel excels. We tried other drying agents, but after standardizing on Davison's Silica Gel, its many additional advantages over other drying agents helped our business forge ahead."

Order Davison's Silica Gel From Your Jobber . . in Factory-Charged Dehydrators and for Refilling.

GIVES YOU—1. Maximum capacity for moisture prevents freeze-ups . . . is not affected by oil; 2. Instant action; 3. Removal of Acids, Corrosive compounds and other impurities; 4. Freedom from Channelling of Refrigerant; 5. Safety—will not attack metals or alloys.

CURTIS BAY WORKS

THE DAVISON CHEMICAL CORPORATION

Progress through Chemistry

BALTIMORE-3, MD.

Canadian exclusive sales agents for DAVISON'S SILICA GEL: CANADIAN INDUSTRIES LIMITED, General Chemicals Division

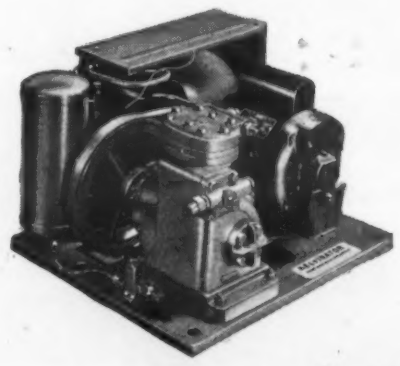
Happy Tales of Trouble-Free Performance

Customer: *"What's going on here?"*

Manager: *"Everybody's raving about our sandwiches since that new Kelvinator Condensing Unit keeps our lettuce so crisp!"*

In refrigeration it's economy, dependability and performance that count! And Kelvinator Condensing Units give all three as a result of 30 years of leadership in engineering, designing and manufacturing of Condensing Units. That's why progressive service men *always* specify Kelvinator!

Kelvinator distributors and zone offices stock a complete line of refrigeration supplies. See them for your installation material such as valves, controls, dryers, etc.



Kelvinator

DIVISION OF NASH-KELVINATOR CORPORATION, DETROIT

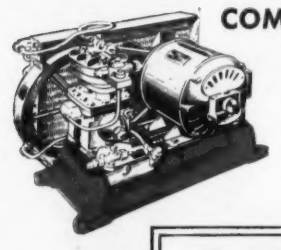
CONDENSING UNITS SEALED • OPEN

FOR YOUR HOME—REMEMBER KELVINATOR REFRIGERATORS, ELECTRIC RANGES, WATER HEATERS AND HOME FREEZERS

"WE HEAR YOU CALLING," Says The Lehigh Team—

but PLEASE be patient!

LAST MONTH we pointed with reasonable pride to our first post-war production chart for condensing units. It was conservative—and honest. With this publication we are over the hump and started. Frankly, we think we have one of the finest pieces of equipment the industry has ever seen. It just purrs along and does its work beautifully. It should be good because it has had plenty of preliminary nursing by the best working team in the business. • • • It will take a bit longer, however, to catch up with your inquiries and orders. Please be patient—it won't be long now!



A Complete Line of COMMERCIAL COMPRESSORS 1/4 to 5 H.P.

Please place your name on our mailing list for our MONTHLY NEWS LETTER.

M&E EST. 1866

REFRIGERATION DIVISION OF

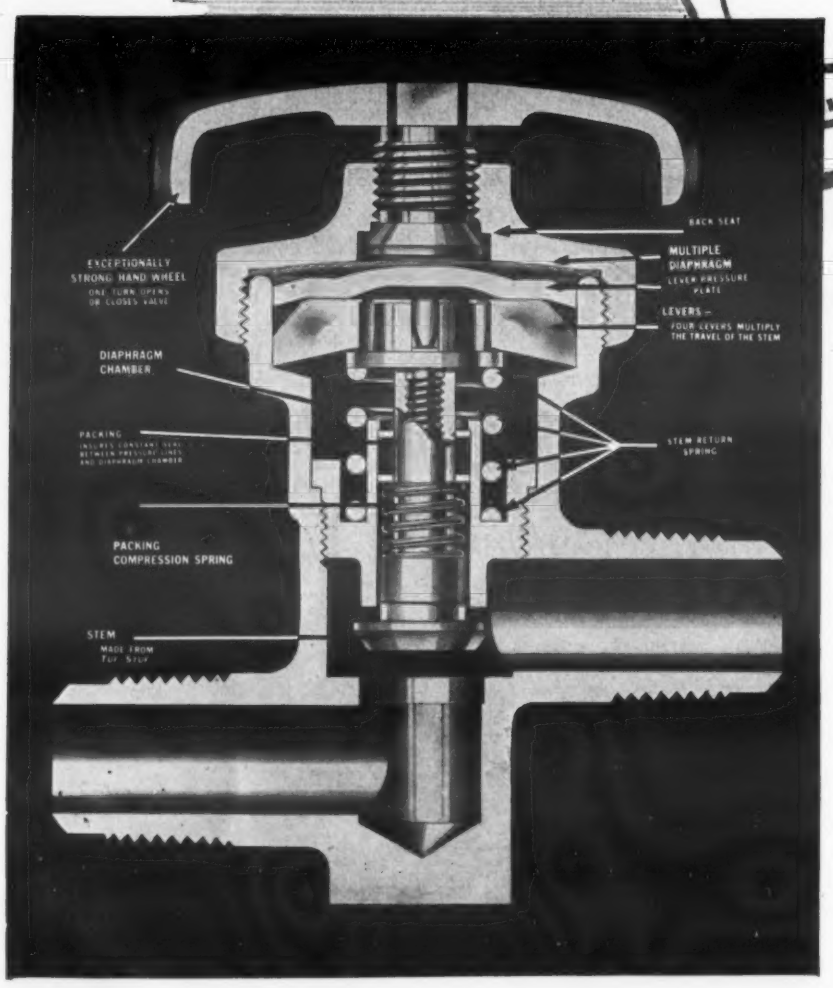
LEHIGH FOUNDRIES, INC.

EASTON, PENNSYLVANIA

Plant: Lancaster, Pa.

Increased...

DIAPHRAGM LIFE PROLONGS THE SERVICE LIFE OF THE VALVE



Because of the small amount of movement, the multiple diaphragm in our TRIPL-SEAL Valve is never deflected past its normal center; thus immeasurably prolonging both its life and the life of the valve in service.

The multiple diaphragm has approximately 20% increased surface area over more conventional types of diaphragms. A single turn only is necessary to open or close the TRIPL-SEAL Valve.

TRIPL-SEAL

Positive sealing at three essential points in the valve is adequately provided for—a back seat with valve in open position,—the multiple diaphragms,—and a packing around the stem. (This packing insures constant seal between pressure lines and diaphragm chamber.)

The stem of the TRIPL-SEAL Valve is provided with a sixty degree bevel, thus procuring the most desirable wedging action for positive and easy closing. It is manufactured from Tuf-Stuf, a strong, corrosion-resistant alloy.

The stem does not rotate, and is constantly guided into the same position against the seat by a cylindrical guide, so processed as to eliminate any possibility of distortion.

The body and cap of the valve are forged brass to eliminate seepage and to withstand frost action; mounting lugs are forged integrally with the body to provide the ultimate in mounting strength.

The hand-wheel is exceptionally strong, and is so designed that it provides a convenient grip for manual operation.

Valves are furnished in two-way, three-way, and angle type—flared or solder type ends—and in complete range of all necessary sizes.

Order through your jobber.

MUELLER BRASS CO.

PORT HURON, MICHIGAN

ORDER THROUGH YOUR JOBBER... ONE SOURCE OF SUPPLY... SAVES YOU TIME AND MONEY

Classification of Army Jobs Is Listed To Show Those Adapted to Appliances

(Continued from preceding page)

Familiar with the use of all small hand tools. Completed a course in maintenance of fire control equipment at an Army school.

Electrician (078)—Installed, tested, and repaired electrical fixtures, apparatus, control equipment, and wiring in connection with all types of electrical equipment. Can read blueprints. Familiar with electrical principles and electrical circuits. Can use all small hand tools. Has knowledge of electricity and the use of electrical tools. Oftentimes has completed an electrical course at an Army school.

Automotive Electrician (912)—Installed, tested, repaired, and rebuilt ignition systems, starters, coils, panel instruments, wiring, and electrical systems on military vehicles of all kinds. Completed a course in the repair of general purpose and combat vehicle electrical systems at an Army school.

Electrical Instrument Repairman (338)—Cleaned, adjusted, repaired, and calibrated such electrical instruments as voltmeters, recording gages, relays and starting boxes, ohmmeters, and other electrical instruments. Inspected instruments for faulty operation. Machined and fabricated parts. Used instrument maker's and electrician's tools. Has a working knowledge of the fundamentals of electricity. Has completed a course in the repair of electrical instruments at an Ordnance school.

REFRIGERATION MECHANIC

Refrigeration Mechanic (322)—Installed, maintained, and repaired refrigeration equipment, condensers, compressors, and motors; assembled and connected pipes and ducts. Familiar with all hand tools. Has a general knowledge of the principles of the operation of refrigeration plants. Has completed a refrigeration course at an Army school.

Administrative NCO (502)—Supervised and directed work of one or more administrative sections of a headquarters organization in the preparation of correspondence, records, forms, reports, etc., supervising prepration of such items, and generally has a wide range of office experience.

Auditor (390)—Audited fiscal or property records, examined inventories, and property vouchers, etc., and generally had a college degree with major specialization in accounting or business administration or a great deal of civilian experience before coming into the Army.

Cashier (269)—Received, issued receipts for, recorded payment of accounts, and cash sales at Army installations, operated office equipment, some bookkeeping work, and had to know a wide range of prices and be adept at figures.

Labor Foreman (356)—Supervised a group or groups in the performance of unskilled jobs, loading, and unloading supplies, etc., and has some knowledge of supply and warehousing problems.

Shop Clerk (457)—Performed various clerical and technical duties in connection with the operation of military shops, etc., kept records, and generally had similiar civilian experience before entering the service.

Stenographer (213)—Took dictation in shorthand of correspondence, board proceedings, hearings, reports, etc., generally an accomplished typist, did filing, indexing, and record keeping, and operated various office machines.

SUPPLY CLERK

Supply Clerk (835)—Performed various clerical and stock-handling duties in connection with receipt, storage, issue, and shipping of general supplies and equipment. Maintained stock records pertaining to such items as amount, kind, and value of supplies and equipment received, issued, expended, and balance on hand. Sometimes has completed a course in supply activity at an Army school.

Clerk-Typist (405)—Performed numerous clerical and typing duties in headquarters units, used most office machines and equipment.

The training of both this group and the foregoing, and in particular those listed under the earlier headings, has enabled them to be of considerable use and readily adaptable to many jobs and positions within the electric refrigeration industry. A familiarity with these Army MOS's and what they mean will aid every employer in speedily and profitably adapting the veteran to his job wherever he may be hired.

It makes that all important practice of "picking the right man for the right job" much easier.

Rights of Veterans Seeking Employment Outlined by Selective Service Officer

By Major Laurie C. Green, Assistant Information Officer, Selective Service System

Industry and business, long mindful of their obligation to provide employment for the returning veteran, now realize the opportunity that is open to them in recruiting workers from among the men and women who have served in our armed forces.

Service in the greatest war of all time has done much to qualify these young people for service in the era of prosperity that lies ahead. They have learned valuable lessons of discipline, but beyond that, they have acquired new skills and their bitter experiences have engendered a new sense of values, a higher appreciation of the opportunities open to them in a peacetime world.

They constitute, in fact, the most desirable and promising group from which industry and business can draw the manpower necessary to meet the demands of the years ahead.

Industry in general realizes that the returning veteran is not a "problem." Save in exceptional cases, the man who has endured even the severest of combat conditions is coming home a normal individual, ready to forget what he has been through and anxious to return promptly to normal living.

Throughout his service, he has looked forward to the day when he would be coming home. He has taken full advantage of what the services offered in the way of training and preparation for a better and

(Concluded on next page)

OPPORTUNITY

Seeks The MAN

A permanent job is waiting for an engineer who is familiar with the technicality of heat transfer and its practical application.

The product is a refrigeration unit manufactured by one of the oldest, most responsible companies in America. Its superiority has been amply demonstrated and its future is such as to challenge the imagination of any qualified engineer who is ambitious to identify his career with the refrigeration industry.

Location—middle west. Requirements—adequate training, of course, plus the ability to be realistic as well as merely hopeful and a personality that gets along with other people. Salary—sufficient to enable the kind of a man we are looking for to concentrate on his job. Opportunity—whatever he can make it. If this appeals to you write us giving the information about yourself that you would want if you were in our place. Address Box 1835, Air Conditioning & Refrigeration News.

Cooperation of Employer & Draft Board Urged to Locate Vets In Right Job

(Concluded from preceding page)

more secure place in his country's economy.

He is given special consideration by law and on moral grounds not because he constitutes a "problem" or a "special case," but rather because he has given years of his life to his country and is entitled to a "break," a chance to pick up where he left off and not be penalized for having served.

MANAGEMENT HELPFUL

Business and industry have given their hearty endorsement to the broad program to provide employment for returning veterans. As a whole, management has cooperated to the fullest with the Selective Service System in carrying out the system's responsibility of assisting discharged veterans to regain the jobs they left to enter service. But the task of helping the great majority of servicemen and women who are not returning to their old jobs is one of the major responsibilities of industry.

What of these men and women? Is there a place for them in an era of industrial progress that promises undreamed-of records in production and expansion? Obviously, there are unlimited opportunities in such an industrial era for the man with ambition, for the man who is willing to build his life around a job which offers him security and a chance for development and advancement.

The Congress, when it wrote the Selective Training and Service Act in 1940, foresaw some of these problems. It placed upon the Selective Service System the responsibility of assisting the discharged veteran in obtaining employment.

In fulfilling this responsibility, Selective Service has found management responsive to the need for understanding of the veteran and his problems. The 6,443 Selective Service local boards, each of which is officially designated as a "Veterans Information Center," have established and are maintaining close liaison with business and industrial leaders within their respective communities and the readiness of management to cooperate has contributed immeasurably in the organization of the veterans' assistance program.

Under the law requiring the Selective Service System to act for the veteran in assuring him of his reemployment rights, contact with industy normally is through reemployment committeemen, one or more of whom are attached to each local board.

The law provides that the veteran is entitled to reinstatement in the job he left to enter service or in one of like seniority, status, and pay, if the position was with a private employer or the federal government, its territories or possessions, or the District of Columbia; if the position was other than temporary; if the veteran applies for reinstatement within 90 days after separation and has a certificate of "satisfactory completion of his training and service"; and if the circumstances of the employer (if a private employer) "have not so changed as to make it unreasonable or impossible" to restore him to the job.

Or, if the veteran is hospitalized immediately upon separation, he may apply for reinstatement at the termination of hospitalization provided it does not continue for more than a year.

After he is restored to the position, the veteran may not be discharged without cause within a year. In addition, he is entitled to restoration without loss of seniority and shall be considered as having been on furlough or leave of absence during his period of service.

He also is entitled to participate in insurance or other benefits "offered by the employer pursuant to established rules and practices relating to employes on furlough or leave of absence in effect with the employer at the time such person entered military or naval service."

PROBLEM OF SENIORITY

A much discussed phase of the law is that relating to seniority. The question heard most often is: Should the veteran be permitted to replace a non-veteran with greater seniority?

Major General Lewis B. Hershey, Director of Selective Service, in a recent discussion of this phase of the problem, stated that some people have said the law should not mean that a veteran gets his job or one like it back when a non-veteran of greater seniority must be displaced.

"As an administrator," General Hershey continued, "I had to decide what it did say and to aid the veteran to secure his rights under the law as now written. The few cases that have reached the United States courts have generally sustained our interpretations. The Congress has been aware of our interpretation for about 18 months, and although it has during that time dealt with this particular section of the law, it has made no change in it."

Hundreds of thousands of the veterans soon to be discharged never had jobs. Large numbers of them went from high schools and colleges directly into the service. These veterans are entitled to aid in finding jobs under provisions of Section 8 of the Selective Service law.

Further, the G.I. Bill of Rights states that it is the intent and purpose of Congress to provide an effective job counseling and employment placement service for all veterans so as to provide for them "the maximum of job opportunity in the field of gainful employment."

GENERAL PRINCIPLES

These are general principles for the reintegration of our veterans to economic life. They do not establish legal rights to specific jobs. However, there is no doubt that the great majority of employers and the great mass of employes want to see these principles equitably applied, and undoubtedly they will be. Unfortunately, the people in the communities where jobs exist and veterans are seeking them, have not always been permitted to solve their problems in their own way.

It has been the experience of Selective Service in administering the employment provisions of the law that problems concerning the veteran and his desire for a job can be worked out most satisfactorily at the local level.

It is for that reason that the major responsibility in carrying out this phase of the program has been placed upon the local boards and their reemployment committeemen, with a minimum of interference from State and National Headquarters.

Throughout the nation, an effort has been made to encourage the veteran seeking a job to call upon his local board for assistance. The board members and reemployment committeemen have been schooled in rendering this service to the veteran.

They know that it is their job to find a satisfactory solution to the veteran's problem without sacrificing any of the veteran's rights. They have been instructed to use the assistance of other government agencies and veterans organizations, as well as labor, management, and civic organizations.

If the veteran feels he needs assistance in getting back his old job and asks for it, every facility of the local board will be used if necessary to aid him. If he wants a new job, the board may assist him in two ways. Where there are local offices the of the United States Employment Service, the veteran may be referred to those offices.

BOARD ACTIVITIES

If there is no local U.S.E.S. office, or if the veteran asks additional help after contacting the U.S.E.S., the board members and the reemployment committeeman will assist him further. This is done most often by personal contact on the part of the board members or the reemployment committeemen with the management of local industry and business.

There are also two additional agencies which cooperate closely with Selective Service. Veterans seeking employment in the government are referred to the U. S. Civil Service Commission, while those wishing work with the railroads are sent to the Railroad Retirement Board.

Ask Your Jobber for
HASCOBILT Parts
SUCTION and DISCHARGE
VALVE, DISC, REEDS and SPRINGS
for Conventional and Hermetic Type Compressors
HASCO, INC.
GREENSBORO, N. C.
If your jobber can't supply you, send for illustrated catalog and price list.

ANSUL ST IN REFRIGERANTS

Ansul was first in America to produce Sulfur Dioxide for refrigeration (1915).

At the demand of the growing fractional-tonnage household refrigeration industry, Ansul began production of Methyl Chloride.

LIQUID Sulfur Dioxide BY ANSUL*

LIQUID Methyl Chloride BY ANSUL*

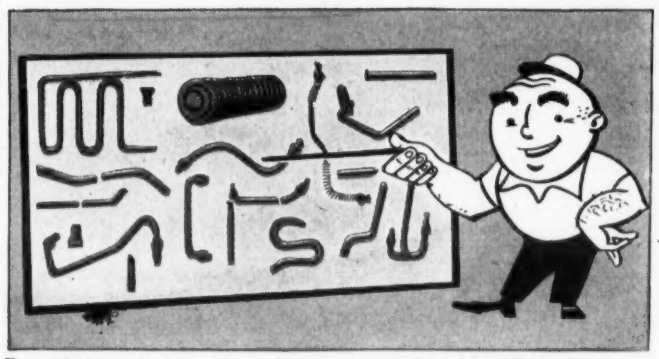
Ansul still analyzes *individually* every cylinder before it is shipped because—

The purity, dryness, and safety of handling of Ansul refrigerants are still top standards of a high-specification industry which Ansul is proud to have pioneered.

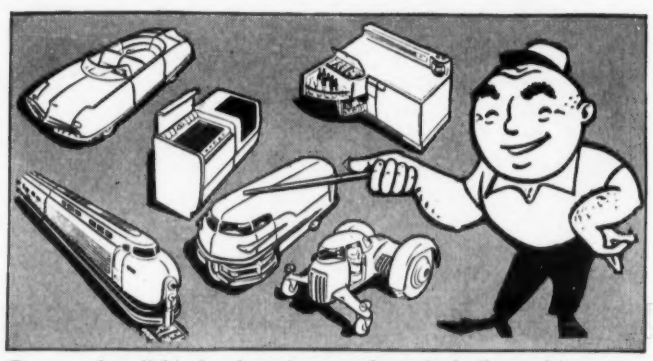
*REG. U. S. PAT. OFF.

ANSUL CHEMICAL COMPANY
"NOW IN OUR 30TH YEAR"
MARINETTE, WISCONSIN
AGENTS FOR KINETIC'S "FREON-11," "FREON-12" AND "FREON-22"

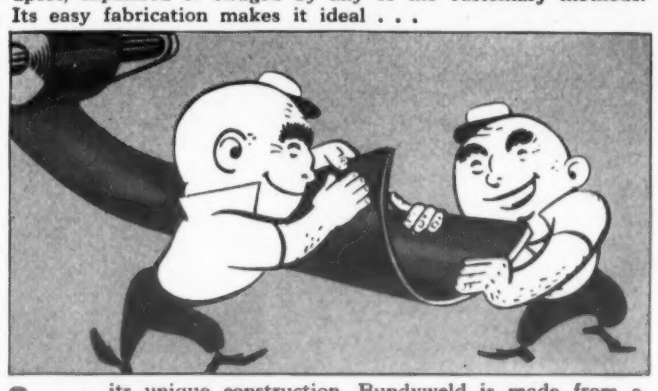
FOR EASY FABRICATION RELY ON BUNDYWELD



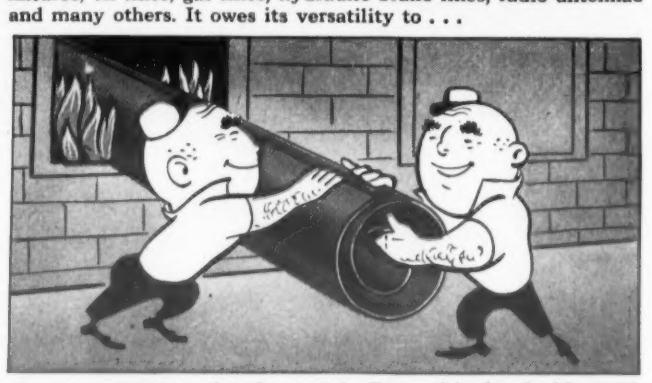
1 YOU call the turns . . . and Bundyweld will make 'em. This famous tubing can be bent, coiled, flanged, flattened, upset, expanded or swaged by any of the customary methods. Its easy fabrication makes it ideal . . .



2 . . . for all kinds of modern products including refrigeration condensers, cooling coils and connecting tubes, lamps and fixtures, oil lines, gas lines, hydraulic brake lines, radio antennae and many others. It owes its versatility to . . .

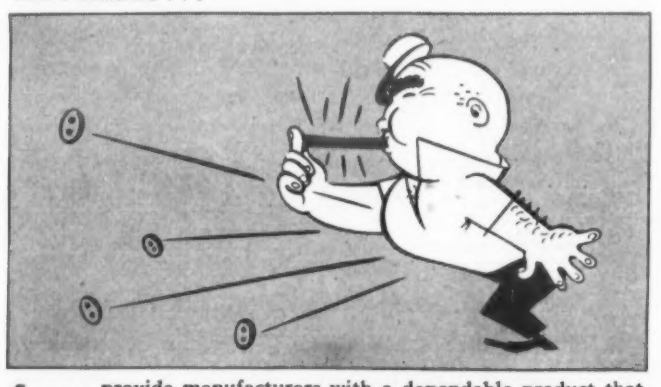


3 . . . its unique construction. Bundyweld is made from a single strip of copper coated steel continuously rolled twice laterally. Walls of uniform concentricity are assured. This double rolled strip passes through a furnace where the . . .



4 . . . copper coating fuses and alloys with the double steel walls forming a *solid* double wall steel tube, copper brazed throughout 360° of wall contact and copper coated inside and out. Furnished . . .

5 . . . hard or annealed in standard sizes up to ⅝" O.D. Special sizes cold drawn. Also in Monel. Bundyweld's high fatigue and bursting strength . . .



6 . . . provide manufacturers with a dependable product that holds up under stress. Engineers, technicians, production experts accept Bundyweld for its fine performance.

BUNDY TUBING
ENGINEERED TO YOUR EXPECTATIONS

Use Bundyweld in your field

Bundyweld's close tolerances and freedom from scale assure quality control plus speed and economy of production of the vital "life lines" for which this tubing is made. For complete information on the use of this famous tubing in your field, contact your nearest representative or write Bundy Tubing Company, Detroit 13, Michigan.

BUNDY TUBING DISTRIBUTORS AND REPRESENTATIVES:

Pacific Metals Co., Ltd. 3100 19th St. San Francisco 10, Calif.
Standard Tube Sales Corp. 1 Admiral Ave. Maspeth, N.Y.C., N.Y.
Lapham-Hickey Co. 3333 W. 47th Place Chicago 32, Illinois
Rutan & Co. 112 S. 16th St. Phila. 2, Pa.
Eagle Metals Co. 3628 E. Marginal Way Seattle 4, Wash.
Alloy Metal Sales Ltd. 861 Bay St. Toronto 5, Canada

SABECO BRONZE BEARINGS

WILL NOT BURN, POUND OUT, SCORE OR SEIZE EVEN IF LUBRICATION FAILS

Because its lead content is evenly distributed throughout its composition without the use of impure agents, "SABECO" bronze contains no hard spots to score shafts or disintegrate into an abrasive, destructive compound. Because it assures a minimum of friction even when lubrication fails, "SABECO" bronze makes ideal bearings. Exceptionally durable, decidedly less expensive in the long run, it has rendered unmatched performance in such widely divergent applications as locomotive side rod bearings and refrigerator compressor seals. For complete particulars on how SABECO bronze will eliminate or greatly reduce maintenance and replacement costs in your products or equipment, write to Saginaw Bearing Co., 861 S. Water Street, Saginaw, Michigan.
Cable address "Sabeco"

sabeco bronze

Sales and Profits Figures Give the Details Of Carrier Corporation's Leadership in the Air Conditioning and Refrigeration Industry

Distribution and Manufacturing Techniques Have Been Major Factors in Company's Growth

Editor's Note: This is the third and final part of a survey of the air conditioning and refrigeration industry recently completed by S. M. Ahmed, economist, for Hirsch & Co., of the New York Stock Exchange.

The first and second parts of the survey, reproduced in the Sept. 10 and Oct. 8 issues of the NEWS, reviewed the growth of the industry and a research study of one of the two great companies dominating it—York Corp.

Presented in this section is a condensation of Mr. Ahmed's study of the other giant in the commercial and industrial field—Carrier Corp.

Carrier Corp. enjoys the distinction of being the first company to pioneer and develop air conditioning. In 1944, when the company completed its twenty-ninth year, it was doing the largest business in the industry. Total Carrier installations are estimated to have passed the 200,000 mark when the war started.

Below are shown the proportion of Carrier's volume to total business done by the leading manufacturers:

Business Activities

Most of Carrier's development and growth has been in the field of engineering and installation of air conditioning systems. This division still represents the major part of the company's business.

With a new distribution system and a new manufacturing technique in recent years, the company has sought to broaden the business from that of "tailor made" building installations to include the larger "consumer market"—the manufacture and sale of a broad line of air conditioning and refrigeration apparatus and equipment including self-contained units for homes, offices, and small stores.

This has been made possible as more and more local contractors and independent engineers learned to handle air conditioning installations. In addition to the advantages obtained from a diversification of products, it serves to minimize the risk of big commercial and industrial installations, when done on a fixed price basis, where a 3 to 4% error in the delicate business of estimating costs may mean the difference between a profit or a loss.

There is also the fact of competition from other manufacturers in the large installation field, and the corollary fact that the expense of designing, estimating, and bidding on a big job, and then losing it, can add considerably to overhead.

The new policy will, also, enable the company to strengthen its position in the second largest market, that of self-contained systems and portable room units. There is also the advantage of offsetting the extreme ups and downs of a capital goods industry.

Carrier has been successful in the large installation field and has made profits in this division. It will continue to hold its share of the big "tailor made" market as the percise installation still requires that the manufacturer follow the job through. A notable diversification has been in the field of refrigerating machinery, for large scale air conditioning requires refrigeration. The company's activities cover all types of cooling equipment, exclusive of household refrigerators.

Carrier's sales are well distributed among direct and dealer sales; large and small installations; foreign and marine divisions. Consolidated sales for prewar and war years were divided as follows:

For many years Carrier has been a leader in the refrigerating and air conditioning equipment field for use aboard ships. It has equipped more than 10,000 ships—passenger, tanker, and cargo vessels, aircraft carriers, battleships, cruisers, etc. World renowned ships such as the Queen Mary, the Normandie, the S. S. America (flagship of the U. S. Lines) have been equipped by the company.

The war brought a great expansion in the Marine Division of the company. Sales rose sharply from a little over one million dollars in 1940 to $6,500,000 in 1943—or 530%. In 1942, the company had contracts for equipping 800 American and British ships.

Although the bulk of marine sales involved refrigeration for food preservation and allied purposes, a considerable amount of air conditioning apparatus was also furnished. Reflecting the completion of the wartime shipping program, marine sales in 1944 decline 23%. Further contraction may be expected, but it is believed that peacetime volume will be well maintained.

To Carrier belongs the credit of developing the largest worldwide market for air conditioning. Carrier products account for about 75% of the total U. S. exports of air conditioning. Prior to the war, foreign business was 9% of gross sales.

For its overseas operations, the company has organized an "International Division" with headquarters in New York, and a number of associated companies abroad. Among other countries, associated companies are located in Australia, Brazil, Canada, Central America, Egypt, England, France, India, Japan, Mexico, South Africa, and Netherland East Indies. War opened up new markets in Russia, Iran, Eritrea, Belgian Congo, and North Africa.

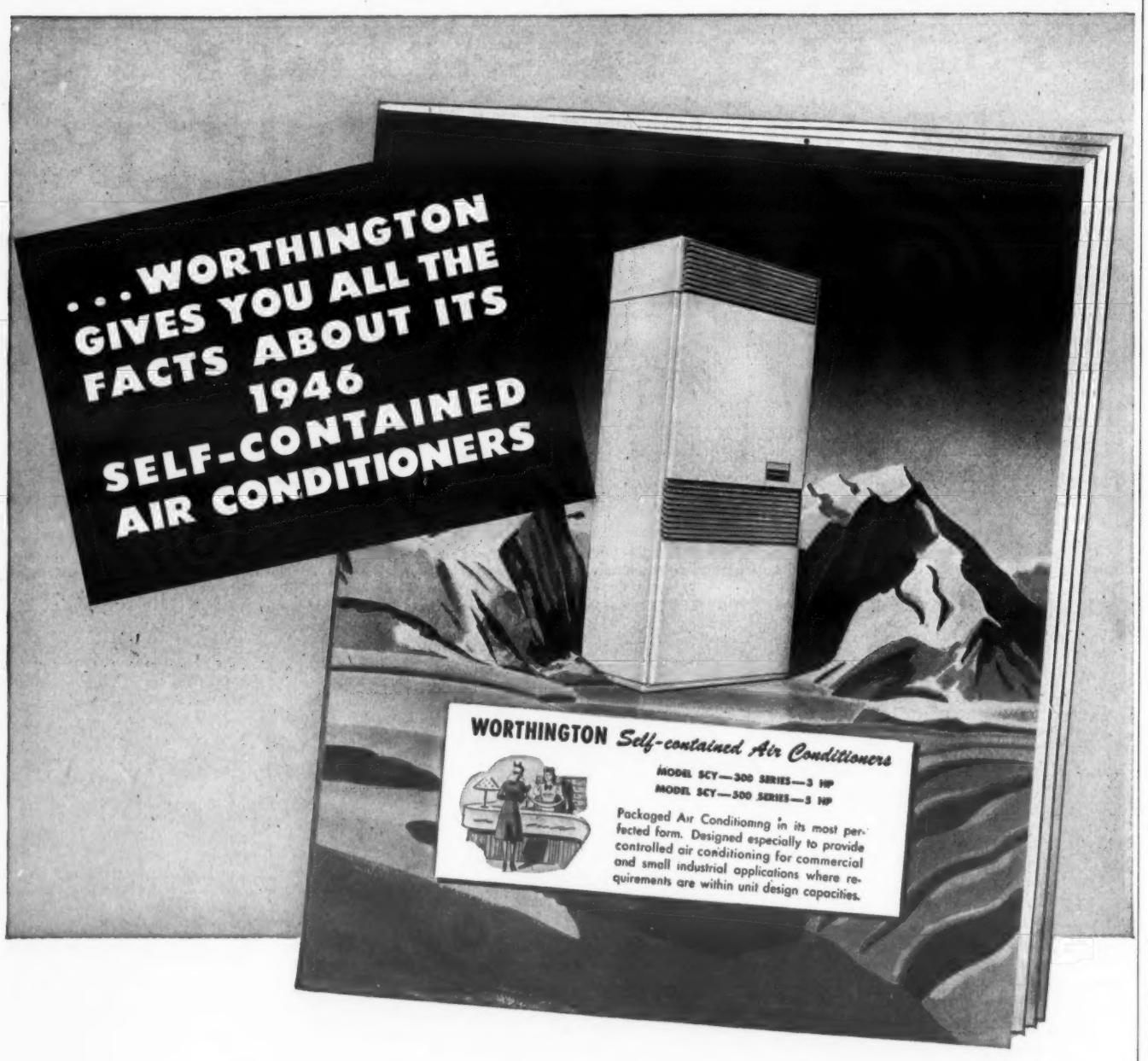
While most of them bear the name of "Carrier," the company has little capital investment in them, and "associates" act as dealers and contractors. For all installations outside the United States, the company furnishes equipment and actual engineering only, selling and installations are handled by associated companies and foreign agents. They enjoy an enviable reputation since some of the

(Concluded on next page)

CARRIER CORP. AND SUBSIDIARIES
Operating Expenses
(in thousands)

	Year Ended October				Year Ended December			
	1944	1943	1942	1941*	1940	1939	1938	1937
Total Sales	$38,256	$27,829	$20,489	$15,272	$13,099	$11,655	$10,598	$17,413
Cost of Sales (Labor & Material)	29,857	21,235	15,559	11,781	9,954	9,286	8,995	13,865
Gross Profits	8,399	6,594	4,930	3,491	3,145	2,369	1,603	3,547
Gen. & Adm. Exp.	4,183	3,678	2,613	2,100	2,290	2,332	2,653	2,882
Operating Income	4,216	2,916	2,317	1,391	855	37	1,050†	656
Other Income	238	190	163	151	179	249	234	339
Total Income	4,454	3,106	2,480	1,542	1,034	286	816†	995

*10 months only
†Loss


...WORTHINGTON GIVES YOU ALL THE FACTS ABOUT ITS 1946 SELF-CONTAINED AIR CONDITIONERS
WORTHINGTON Self-contained Air Conditioners
MODEL SCY—300 SERIES—3 HP
MODEL SCY—500 SERIES—5 HP
Packaged Air Conditioning in its most perfected form. Designed especially to provide controlled air conditioning for commercial and small industrial applications where requirements are within unit design capacities.

Write For Your FREE Copy of This Booklet

Whatever your interest in packaged air conditioning units... specifying, selling, buying, installing, or maintaining them... you'll want to read this new booklet.

You'll want to learn all the facts about this latest development in air conditioning, attractive self-contained units that give you real air conditioning in the most economical and perfected form. You'll want to see how such compact cabinet units provide year-round air conditioned comfort... cool, invigorating air in summer... warm, filtered air in winter. You'll want to learn why these units for commercial and small industrial applications where space is limited, make possible an economical first cost and low operating cost.

Write for your copy of this 8 page booklet on Worthington Self-Contained Air Conditioners today ...and learn why *there's more worth in Worthington. Worthington Pump and Machinery Corporation, Air Conditioning and Refrigeration Division, Harrison, N. J.* Specialists in air conditioning and refrigeration machinery for over 50 years.

WORTHINGTON

AIR CONDITIONING

EASY TO CARRY EASY TO USE

POSITIVE • QUICK • CLEAN LEAK DETECTION

CONSERVE IRREPLACEABLE REFRIGERANT GASES

Halide Leak Detector (may also be used as Hi-Heat Alcohol Blotorch)

Ask Blotorch Bill

THE Lenk MANUFACTURING CO.

NEWTON LOWER FALLS 62, MASS.

Manufacturers of Soldering Equipment Since 1919

ADDRESS: POST OFFICE BOX 8-A

Extended Postwar Foreign Market And Greater Mfg. Facilities Planned

(Concluded from preceding page)

well known capitols, hotels, banks, palaces, and public buildings are equipped with Carrier machinery.

Latin America became Carrier's number one export market. Sales of self-contained units in this region had more than tripled in 1941. Equipment is sold to textile mills in Cuba, Colombia, and Brazil, where the third largest textile industry is in the making, and for nitrate processing in Chile.

War conditions resulted in a substantial curtailment, and 1943 foreign sales represented only 5% of the total.

In the postwar the company plans to develop its foreign market on a larger scale than before. Since few other countries are in a position to supply equipment and Carrier has already entrenched its position through associated companies against other American manufacturers, it will have an outstanding position in the whole world market. For the past four or five years foreign customers have not been able to obtain equipment and this should result in a large backlog of order in addition to new requirements.

While the company maintains its own direct selling organization, it sells a substantial volume through franchised dealers. The dealer organization is reputed to have a very well trained force of field sales representatives.

Carrier, by franchising heating and plumbing contractors as dealers, has penetrated into the closely knit building trade. This is reflected in the steady large gains in dealers sales from year to year. Dealers sales usually represent "unitary" self-contained equipment, but in many instances they also install small-sized "central systems." Its own sales force sells to owners both equipment and systems usually of over 50 tons capacity.

Carrier's interest in manufacturing arrangements with Aeofin Corp. have proven of great benefit. These operations were covered by contract with Aerofin extending to November, 1953. One third of the stock interest in Aerofin is held by Carrier, the other two thirds being owned equally by B. F. Sturtevant (now a Westinghouse subsidiary) and Buffalo Forge.

Carrier manufactures all of that company's requirements in heating, cooling, and other equipment employing special fin tubing. Aerofin's business is reported to gross $3 to $5 million annually. Carrier, in addition to its manufacturing profits on Aerofin products, receives a sizeable share of net from Aerofin.

In view of the huge market potentialities for air conditioning and refrigeration equipment in the food industry, Carrier's postwar plans include considerable expansion for specially designed equipment in food processing and preserving.

Carrier participated in the formation of Frozen Food Foundation established in Syracuse, N. Y., where the company's plants are located. Cornell University will cooperate in food research and Carrier will furnish technical skill.

Wilson & Co., one of the largest meat packing houses, is carrying on experiments in cooperation with Carrier in the frozen meat field. Undoubtedly these affiliations will give Carrier an advantageous position in the food industry.

During 1944 the company established a manufacturing laboratory with three objectives: to improve engineering designs; to determine and perfect production, processing techniques and procedures; and to train specialized factory personnel—all before the production in question goes into full scale production.

While the major portion of the company's products are manufactured under its own patents, some products or parts used in its production are made under license by others. However, patents have not played a large part in this industry.

During 1944, Carrier reestablished a training program for engineers. Some 70 (included in this number are men from Chile, China, France, India, Philippines, and other countries), are at present undergoing training in the theory and practice of air conditioning and refrigeration.

Manufacturing

Recent principal technical developments made by Carrier are (a) the redesign of the centrifugal compressor to produce increased efficiency at lower costs; (b) the adaption of centrifugal refrigeration machines to extremely low temperature requirements; (c) the application of centrifugal compressors for the use of air and gas blower; (d) a new type of heat exchange surface for refrigeration usage; (e) many special products used for war purposes, such as walk-in coolers at naval bases, army trailer units, airplane portable coolers, engine driven portable refrigeration systems, and specialized refrigerators for the Marine Corps.

In the postwar period, the company plans to expand its manufacturing facilities considerably. The growth in volume has been so rapid and large as to strain the capacity. To meet this situation the company has set aside over $2 million for postwar plant expenditures. New plant facilities should improve the efficiency.

To judge Carrier's future possibilities, one must recognize the commanding position of the company in the industry, and the long-term outlook previously described. We estimate that after the reconversion period, Carrier's sales should increase at an annual rate of 15%, or a realization of more than double their 1944 volume in four to five years.

CARRIER CORP.
Orders Booked and Gross Sales
(in thousands)

Six Months	Orders Booked	Uncompleted Orders at Year End	Total Sales	Index of Sales (1933=100)	Estimated Total Sales Excluding War Business	Index of Sales Excluding War Business
April, 1945	$15,055	$20,224	$12,705			
April, 1944	18,407	28,000*	13,558			
Year Ended						
Oct., 1944	33,513	18,533	38,256	637	$30,605	510
Oct., 1943	27,977	23,276	27,829	463	22,263	369
Oct., 1942	34,510	23,128	20,489	341	16,391	273
Oct., 1941†	19,298	10,212	15,272	254		
Year Ended						
Dec., 1940	14,376	4,903	13,099	218		
Dec., 1939	12,541	3,652	11,655	194		
Dec., 1938	11,061	2,856	10,598	176		
Dec., 1937	16,746	2,573	17,412	189		
Dec., 1936	11,185	2,970	10,464	174		
Dec., 1935	‡	‡	9,442	155		
Dec., 1934	‡	‡	6,658	111		
Dec., 1933	‡	‡	6,095	100		
Dec., 1932	‡	‡	6,339	104		
Dec., 1931	‡	‡	7,882	131		

*Estimated
†Not published
‡10 months only

Year	Carrier's volume % of total members of ACMA*	Year (Ending April)	Carrier's volume % of total members of ACRMA†
1936	45.6	1942	19.20
1937	47.5	1943	18.79
1938	42.9‡	1944	21.70
1939	46.9		
1940	56.4		

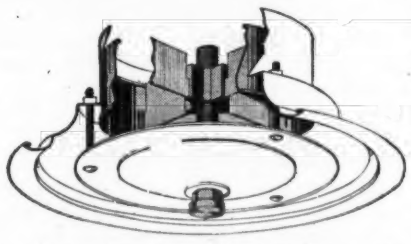
*Air Conditioning Mfrs. Assn. †Air Conditioning & Refr'g Machinery Assn.
‡Drop reflects the moving of manufacturing plants to Syracuse, N. Y.

	1943	1940
Installations made directly by the company	18%	32%
Equipment sold directly to customers and contractors	21	13
Equipment sold through domestic dealers	6	28
Equipment sold through foreign dealers	5	9
Equipment sold for use aboard ships	24	8
Equipment manufactured for Aerofin Corp.	6	10
Special war products not included above	20	..

Control of air direction and volume as an aid to satisfactory supply air diffusion

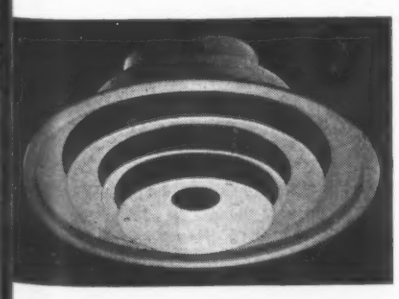
Whether they are used in heating, cooling, ventilating, or combined systems, KNO-DRAFT Diffusers can be adjusted quickly and accurately for system balancing and individual or seasonal requirements. As a result the factors of temperature variation, temperature fluctuation, drafts and noise can be minimized considerably.

Type K Adjustable Diffuser with Type D Volume Damper for suppy air.



Pat. and Pat. Pending

Any desired condition at your finger tip.



Type SR Adjustable Diffuser for supply and return air

By simply turning the air adjustment screws (easily accessible from under the unit) the inner cone may be raised or lowered to secure any angle of air direction required. A built-in damper, with which either model can be equipped, varies the outlet aperture uniformly without affecting the outlet velocity or diffusion pattern. Thus, the air direction and volume of the same KNO-DRAFT Diffuser can be adjusted to be equally effective in expelling chilled air parallel to the ceiling or ejecting heated air downward to prevent stratification.

With KNO-DRAFT Adjustable Diffusers many engineers have been able to insure efficient air distribution, maxium premixing of room and supply air, noiseless and draftless diffusion and uniform temperature throughout the occupied zone. And they have been able to reduce labor and sheet metal costs by distributing large volumes of air at higher duct velocities in smaller, simplified ducts with fewer outlets, because KNO-DRAFT Diffusers permit the use of higher neck velocities.

The W. B. Conner Engineering Corporation maintains a staff of trained specialists and district representatives in leading cities to assist you with any air distribution problem.

FREE HAND BOOK

Contains clear sketches, charts, dimension prints and instructive text that simplify the selection and installation of air diffusers. For your copy write Dept. A-8.

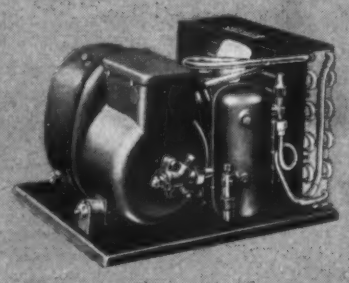
W. B. CONNOR ENGINEERING CORPORATION
AIR RECOVERY · AIR PURIFICATION · AIR DIFFUSION
112 EAST 32ND STREET · NEW YORK 16, N. Y.

The X-ray works for you

...when you *Sell Servel**

***Servel's new "Supermetic" condensing units will serve dealers and fixture manufacturers in every vital field**

1. STORE FIXTURES
2. MILK COOLERS
3. HOME LOCKERS
4. BEVERAGE COOLERS
5. VENDING MACHINES
6. ROOM COOLERS
7. FARM FREEZERS
8. WATER COOLERS
9. INDUSTRIAL COOLING
10. VEHICLE REFRIGERATION



That powerful X-ray machine shown above is one of your best salesmen! True it's a "silent" salesman, operating in the Servel engineering laboratories, rather than from your office. But it still works hard for you, building customer confidence and acceptance for the Servel condensing units you sell.

For this X-ray equipment is used to eliminate materials with hidden weaknesses. Servel engineers X-ray representative castings from every foundry run, as well as samples of rolled, drawn, and other material. "Blow holes," cold shuts, and other defects are infallibly revealed, and defective material discarded.

Tests like these help explain why Servel units invariably measure up to your customers' most exacting requirements. They are part of the reason for Servel's twenty-year record of service and dependability . . . for the widespread consumer acceptance which makes the selling of Servel units so easy and pleasant.

Soon you'll be able to cash in on this customer confidence and acceptance with a complete new line of Servel units. They'll be built to the same high Servel standards, and especially engineered to meet your requirements.

For free advance information, send a postal today for the new folder, "Servel Supermetic." Address Servel, Inc., Department RN, Evansville 20, Indiana.

SERVEL, Inc. Electric Refrigeration Division, Evansville 20, Indiana

BUILD LASTING CUSTOMER GOODWILL WITH THE QUALITY-BUILT BEN-HUR "Farm and Home" Freezers

QUALITY is remembered long after PRICE is forgotten" is a truth that applies particularly to freezers for the farm and home. Today, with a great and widespread public interest in home freezing units, it is highly important for distributors and dealers to choose a line that insures these *ESSENTIAL FEATURES:*

Write for full particulars TODAY.

BEN-HUR MFG. COMPANY
634 East Keefe Avenue, Milwaukee 12, Wisconsin

ARMY E NAVY

★ ***Construction that is Sound*** and Durable, with long-lasting, properly built-in insulation.
★ ***Laboratory Tested,*** under all conceivable operating conditions.
★ ***Design that is Practical*** — efficiently planned for conveniently accessible storage.
★ ***Engineered*** and Perfected by Leading Refrigeration Experts — to assure continuously dependable operation.
★ ***Complete Size Range*** — Meeting All Family Needs — City or Country.

BEN-HUR FARM & HOME FREEZERS

Manufacturers Must Prepare to 'Sell or Go Bust' In Next Decade, N.A.M. Warned

DETROIT—"Industry must adopt a postwar philosophy of sell, sell, sell, or go bust if it is to succeed in the seller's market that is bound to come in two or three years," warned Charles Luckman, president of the Pepsodent division of Lever Brothers Co., in his luncheon address to 250 top executives of the National Association of Manufacturers at the Hotel Statler here Oct. 9.

"Any company that aspires to sell the quantities of merchandise that must be sold within the next decade must strictly adhere to the following six major points in its business operation," continued Mr. Luckman.

GOOD POLICY NEEDED

(1) Good policy. This specifies a fair and square deal to all concerned —office help, factory employes, and the public. The right kind of internal and public relations will pay off in dollars and cents.

And dissatisfaction among the office employes is a swell way to break down a company's relations in the business world. Letters will be mailed out that broadcast poor internal relations, said Mr. Luckman.

Although Mr. Luckman graduated from the University of Illinois with a degree in architecture, his first job was in the advertising department of Colgate-Palmolive Peet Co. Due to his successful philosophy of selling soap *through* the store to the consumer rather than simply *to* the store, he rose rapidly in the company until he became divisional manager in Cincinnati.

His excellent performance came to the attention of the Pepsodent Co., and in 1935 he was hired as sales promotional manager. After a series of promotions including sales manager, vice president in charges of sales and advertising, and general manager, he became president in 1943.

MANAGEMENT IMPORTANT

(2) Good management. Mainly the speaker stressed the fact that the man at the helm isn't supposed to row the boat, he merely charts the course.

Although an executive must know the essentials of his business, he must assign to other capable men the responsibilty *and* the authority to carry out his policies, stressed Mr. Luckman.

Mr. Luckman then offered a caution along this line. "See that your delegation of responsibility doesn't set one department against another. When two departments are working in conjunction, be sure that each knows just what the other is doing. Also, assign definite responsibilities to each."

Mr. Luckman closed his discussion of this second point by saying, "It is mentally impossible under existing conditions today for an executive to know every angle of his business, and it is a compliment for him to say he doesn't know. Impress this upon your departmental heads. Don't make them ashamed to admit they don't know something, but be sure they know where they can find the desired information when it's needed."

IMPROVE PRODUCTS

(3) Good products. Due to substitute materials and ingredients necessitated by the war, products have deteriorated, declared Mr. Luckman. But when a manufacturer faces this new era with getting back to prewar products as his ultimate objective, he is falling into a dangerous retrospect.

"This is retrogression instead of progression. "Now, mind you, I am not referring to those of you who are faced with temporary problems of retooling and must therefore come out with prewar models for the present. But let this necessary retrogression be but a temporary measure only," qualified the speaker, "for the public will demand a better product due to wartime research."

(4) Good advertising. It is not enough for a manfacturer to put out a good product—people must be convinced of this fact, and that's the major role of advertising, stated Mr. Luckman.

"Advertising can succeed more fully if a company has the other five prerequisities I am stressing, for if the other qualifications are present, the same amount of money spent on advertising will result in three and one-half times as many sales," he continued.

The only valid road to lower prices is more efficient production and distribution, and if the American people are given a chance to believe that, the market ahead can be as big as total employment will require, stated Mr. Luckman.

(5) Good merchandising. If advertising moves the people to the product, merchandising moves the product to the people. Merchandising takes in all the factors of effective presentation, including the appearance of the product, display, the personality of a store, and its personnel, according to Mr. Luckman.

"We must remember that the job of the manufacturer doesn't end with the sale of his product to the distributor or dealer, but only with the customer's approval of the product in his own home," stressed Mr. Luckman.

"Main objective to be kept constantly in the manufacturer's mind is that he is selling *through* the dealer, not *to* him, and this entails backing your dealers to the limit," he said.

MUST TRAIN SALESMEN

(6) Good sales organization. "I leave this point to the last, not because it is less important than the others, but because it is both the first and last major point in the picture," explained Mr. Luckman.

"I'm sorry to say there aren't many really good sales organizations in the country, because all we do is *hire* not *train* our salesmen. And I feel the necessity of a caution at this point. Take your sales training school to the men in the field, don't bring them to a factory school," he advised.

By working with the salesmen, the manufacturer is giving them first hand evidence that he believes their job is of major importance, which it most assuredly is, continued Mr. Luckman.

All sales executives from the vice president in charge of sales on down must be able to sell and thus say to the salesman, "Don't do as I *say,* do as I *do,*" stated the speaker. Telling salesmen how isn't enough—it sounds too easy—and is never completely convincing.

"Every sales executive should be required to spend 40% of his time in the field. Personal presence, personal performance—these convince a salesman of the importance of his job. These—and a good salary or commission."

The SHUCKER TRAY

The TILT OUT TRAY

Again those two Magic Finish Ice Cube Trays—the Shucker Tray and Tilt Out Tray—are available to replace war-weary trays and to find their way into the new post-war refrigerators.

For maximum convenience — for minimum cost—it WAS and still IS ice cube trays by Inland . . . the choice of refrigerator makers, jobbers, dealers, and users.

Always leaders in the development of ice cube trays, look to Inland engineers for future developments.

For details and prices, write to

INLAND MANUFACTURING DIVISION
General Motors Corporation • Dayton, Ohio

They finished their job — let's finish ours! BUY VICTORY BONDS.

WANTED!!!

Shop foreman and engineer with knowledge of production on reach-in boxes, meat and delicatessen cases, walk-in boxes, etc. Must be experienced and capable of taking charge of complete cabinet factory.

ELSTER'S
115 S. Los Angeles St.
Los Angeles 12, California

NIAGARA
DUO-PASS
AERO-CONDENSER

● Lowers condensing temperatures, saves power and water, increases the capacity of present equipment.

Patented Duo-Pass prevents scaling of condenser tubes.

NIAGARA BLOWER COMPANY
25 Years of Service in Air Engineering
6 E. 45th St., New York 17, N. Y.

MAN WANTED

We require an outstanding sales engineer with the following qualifications:

Age 32-38.

Thorough knowledge of commercial refrigeration.

Intimate acquaintance with refrigeration jobbers and manufacturers midwest.

Capable of formulating sales policies.

Record of reliability, integrity and successful sales results.

We are located in the midwest, manufacturing low side equipment and selling to the leading manufacturers and jobbers in the United States. Position is permanent, and remuneration will be in excess of $7500 annually.

Kindly submit complete history, together with recent photograph. Box No. 1843, Air Conditioning & Refrigeration News.

Provincial Official Tells Nova Scotia Poultry Producers To 'Install Refrigeration, Or Lose Out To Competition'

HALIFAX, Nova Scotia — Electrical refrigeration equipment, which has been installed as rapidly as possible in place of ice-cooling methods, has been the means of advancing poultry production into the front rank of business in the Canadian province of Nova Scotia, elevating the industry into the $5,000,000 bracket, according to a report issued by G. K. Samis, Provincial Poultry Promoter.

There now are five large cooperative stations located at various parts of the province equipped to handle poultry the year around, as well as several privately owned stations similarly equipped, Mr. Samis noted. He added: "At other points the cooperative shipping clubs are making plans to install refrigeration, as they realize that this is going to be necessary if they are to be in a position to compete with packs from outside the province and, later on, in the world market."

Noting that most of the changes to mechanical coolers have taken place within the past two or three years, Mr. Samis reported that in addition to the plans of some cooperative groups to install new refrigeration equipment, other groups which have one or two units in operation now are building larger plants or adding additional units, some for sharp freezing, while still others are planning to install lockers for use on a rental basis by their members and patrons.

Mr. Samis said that it had been essential for the industry to turn to mechanical coolers in order to maintain quality and avoid serious losses from decomposition and spoilage. He pointed out that the body temperature of a live fowl is 107° F. and quick removal of the body heat and proper pre-cooling before packing were essential.

Indicative of the necessity of abandoning ice-cooling methods was the fact that while the temperature of a storage room could be lowered to 32° through the use of ice and fans, the temperature would rise to 50° or higher when poultry was brought in, it was reported by Mr. Samis.

"The use of mechanical refrigeration units capable of holding room at any desired temperature, usually between 30° and 45° for precooling, has taken the risk out of processing poultry," he added.

Ralph Lee Returns as Trane Export Manager

LA CROSSE, Wis.—Captain Ralph E. Lee, recently discharged from the Army Air Corps, is now manager of the export department of the Trane Co. here, manufacturer of heating, cooling, air conditioning, and heat exchange equipment.

Captain Lee, who holds the Distinguished Flying Cross and Air Medal with four Oak Leaf Clusters, left the company's general sales department in March of 1942 to enter the service.

Camp Bowie Opens New Course In Refrigeration

CAMP BOWIE, Tex.—The Mechanical Refrigeration Service School opened here recently with 180 registered, it was announced by Mrs. Helen Connell, educational director.

The course is offered for beginners who are interested in acquiring proficiency in installing, servicing, repairing, and operating modern refrigeration machinery.

Camp Bowie College obtained Brooke D. Smith as instructor, and Lieut. Donald R. Bornan as assistant.

The class meets at 7:30 p.m. every Tuesday and Thursday. One hour is devoted to lecture-demonstration and another hour to special training in sub-divisions of refrigeration. It is a 12-week course.

The majority of men are taking the course in preparation for jobs in that field.

New San Diego Firm

SAN DIEGO, Calif. — Gordon L. Scharfenberg, Ellis S. Lawaugh, and Nina B. Scharfenberg have published a certificate that they are conducting business under the firm name of Gordon Refrigeration Construction at 821 Fifth Ave. here.

Carrier Corp. Net Profit For 12 Months Ending Aug. 31 Was $632,550

SYRACUSE, N. Y.—Carrier Corp., in a report sent recently to stockholders, disclosed net profit carried to earned surplus for the 12 months ended Aug. 31, 1945, amounting to $632,550. This includes carry-back tax refund of $285,800.

Commenting on earnings for the corporation's current fiscal year which ends Oct. 31, Cloud Wampler, president, stated: "Results thus far in fiscal 1945 have been less unfavorable than those budgeted a year ago when it was decided to accelerate Carrier's readiness-for-postwar program, even at the expense of current earnings.

"This program includes not only reconversion of manufacturing facilities, but also development of new products, improvements to old products, and the re-establishment of distribution outlets, both in this country and abroad."

As of Aug. 31, 1945, Carrier had a backlog of uncompleted sales amounting to $12,130,313, the bulk of which is made up of orders for peacetime products and services. In this connection, Mr. Wampler commented: "New orders are being booked in highly satisfactory volume. And the outlook is sufficiently favorable to warrant the belief that the improved facilities of the corporation will be utilized to the utmost."

Carrier also announced in its letter to stockholders that beginning with the coming fiscal year a 12-months earnings statement will be issued every quarter.

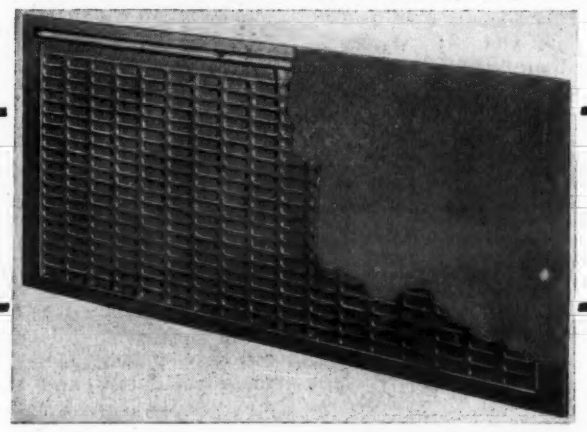
Baak Heads Controls Division of Henry Co.

LOS ANGELES—Appointment of Albert E. Baak as executive director of the controls division of the Paul Henry Co., manufacturer of electrical parts and equipment, was announced recently.

Mr. Baak has been associated with the Minneapolis-Honeywell Regulator Co. for the past 12 years, and is a research and development engineer on temperature and pressure controls.

Announcement was also made concerning a complete line of Paul Henry Co. control devices embodying a snap action arrangement that lends itself to accurate control of temperature, pressure, humidity, and mechanical displacement. Trade name of these control devices is Cam-Stat.

More Than Merely *"Efficient"*
It's Downright SENSATIONAL



The HUBBELL-YODER
FULL FLOODED
REFRIGERATION PLATE

"Full Flooded" means just what the term suggests. More particularly, it means the fastest, most effective, most economical refrigeration you ever saw. Look at the cutaway picture showing the structure of a Hubbell-Yoder plate and you'll readily see why.

The whole interior is literally "flooded" with the refrigerant which spreads out in all directions through a network of ducts. Hence the entire area of the plate is prime heat pick-up surface. Actually—not relatively. In terms of performance, a Hubbell-Yoder plate will frost in 35 minutes—and that's leaving plenty of margin. It will reduce the interior temperature of a cabinet from room temperature to zero in four hours—which, again, is on the conservative side.

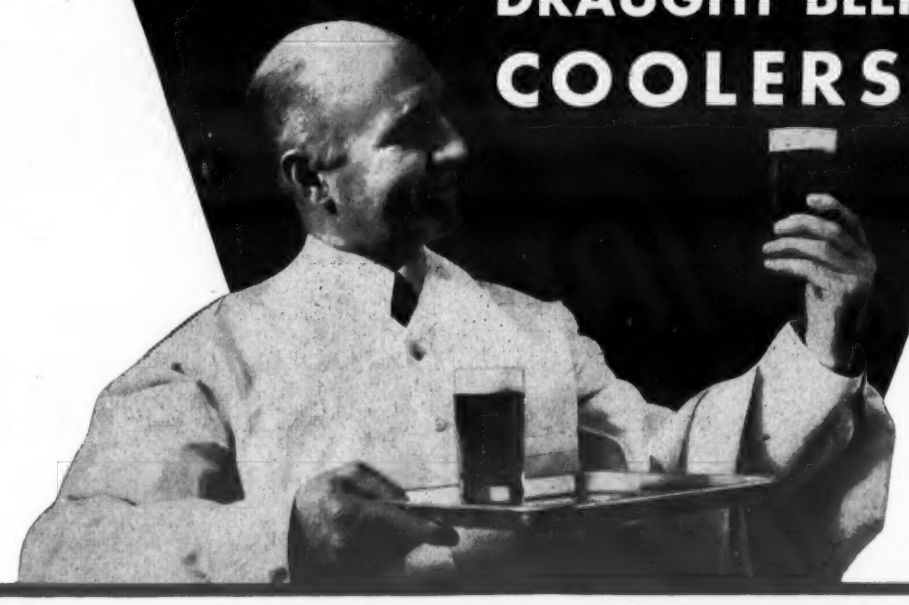
Hubbell-Yoder Full Flooded Refrigeration Plates are made for frozen food locker plants, freezer cabinets, fruit and vegetable counters, ice cream cabinets and hardening rooms, milk and beverage coolers, soda fountains and other refrigeration purposes. If you are a manufacturer of such equipment the Hubbell-Yoder label on the refrigeration unit indicates a standard of service to your customers that will lift your product above ordinary levels and help you meet the sharp competition that is just ahead in this industry.

Better write for information.

ENGINEERING SERVICE, INC.
1311 West 80th Street, Cleveland, Ohio
Sole Agents for
THE YODER COMPANY, FABRICATING DIVISION,
MANUFACTURERS

HUBBELL YODER REFRIGERATION PLATES (TRADE MARK)

Here Again
Temprite
DRAUGHT BEER
COOLERS



← The collar is right because the temperature is right.

Compact, Easily Installed Unit Does Away With Draught Beer Waste

The uniform, constant 40 deg. temperature of the new Temprite cooler means that each and every glass is dispensed perfectly. Common beer waste, which is invariably the result of incorrect temperature, is eliminated.

SOME TERRITORIES STILL OPEN FOR AGGRESSIVE MERCHANDISING OUTLETS . . . Where territories are franchised, name of present outlet will be furnished so that local arrangements can be made . . . *WIRE US TODAY.*

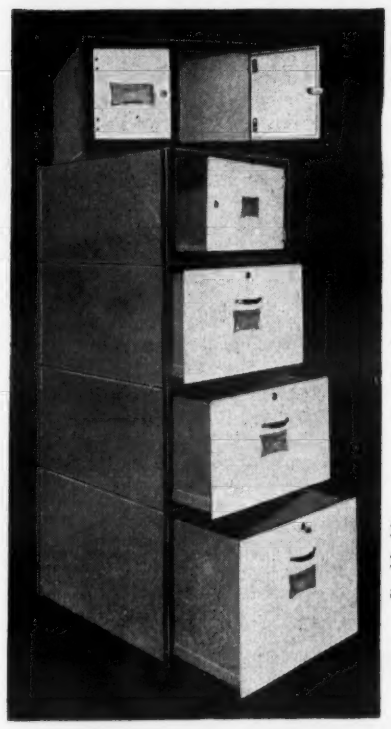
WATER COOLERS • TEMPRITE CONTROL VALVES • OIL SEPARATORS • HEAT EXCHANGERS

TEMPRITE PRODUCTS CORP.
Originators of Instantaneous Liquid Cooling Devices
43 PIQUETTE AVENUE DETROIT 2, MICHIGAN

Since 1935

There Is No Substitute For Experience

Our new and enlarged plant is devoted exclusively to the manufacture and development of Lockers for the Locker Plant. That has always been our business and we know from experience that dependable lockers are the product of specialization and devotion to that business. Get the "Choice of the Industry" the



MASTER FOOD CONSERVATOR

Their features assure profitable and economical locker plant operation. Sturdy construction—enamel finish—utmost in sanitation—protection against odors—dehydration. It's the first-cost, last-cost locker.

Write, Phone or Wire

Your requirements will be shipped immediately. Remember the right unit is important—so order MASTER today and safeguard your interests.

Endorsed by and sold through distributors of refrigeration and insulation.

MASTER MANUFACTURING CORP.

121 Main St. **Sioux City 4, Iowa**

Member of Frozen Food Locker Manufacturers and Suppliers Association organized for your protection.

Over 700,000 Master Food Conservators in Use

SUPPORT THE 8th WAR LOAN

Off the Chest

HOW MANY MAKES 20 YEARS AGO?

Smith Distributing Co.
831 E. Broadway
Louisville 4, Ky.

Editor:

Several of our dealers have asked us, "How many refrigerator manufacturers there were 20 years ago?" "How many have fallen by the wayside?" and "How many have survived?" We will appreciate your sending us what information you have.

PHIL EIGELBACH,
District Representative

Answer: Of 242 known producers of household refrigeration equipment (including firms who have assembled cabinets and units bought from others but sold under the firm's own choice of names), who have been in the field in the past, 23 are still active (including six new manufacturers since the beginning of the war). In 1942, 24 firms were active in the field, but seven of that number dropped by the wayside during the war, or haven't announced postwar production plans as yet.

In 1932, approximately 70 firms were producing household refrigeration equipment, so, in a period of 10 years, approximately 45 firms had disappeared. Of course, out of the known number of mortalities, 25 firms were absorbed by other manufacturers, and the others have resulted from various causes.

'GREAT DAY COMING' READ REPEATEDLY

Carrier Corp.
300 So. Geddes St.
Syracuse 1, N. Y.

Editor:

I would like to take this opportunity to express my thanks to the author of the book *Great Day Coming!* and congratulate him on a very well written book of a timely subject.

Certain parts of this book which have been of most interest have been repeatedly read, and I am sure considerable benefit in obtaining the author's thinking will be derived.

Without a doubt, this text has covered the subject more completely than any other information deemed available to the writer.

Such marketing slants as are indicated in the text are most beneficial to the engineer in his thinking and postwar designing.

T. G. CRIDER, Unit Engineer,
Package Refrigeration Division

HOW TO KEEP YOURSELF IN GOOD CONDITION

Paul Allen Refrigeration Service
1107 Main St.
Little Rock, Ark.

Editor:

Keep up the good work on your splendid publication. We stay in pretty good physical condition fighting over the latest copy.

ED THOMPSON,
Sales Division

BAUBIE OF JACKSON STARTS EXPANSION

Baubie Refrigeration
1000 S. Wisner St.
Jackson, Mich.

Editor:

In your Sept. 10 issue on page 19 you have an article relative to the Arctic Refrigeration Co. building an $11,000 salesroom on W. Main Street here in Jackson. I believe you were in error on this, as Arctic is located in Lansing and they are building a new salesroom on W. Main Street in Lansing.

On the other hand you might have confused them with us, as we have already broken ground and started construction of a $10,000 salesroom, service department, and warehouse at 1515 West Morrell St., Jackson.

We have distributed McCray commercial refrigerators in the six counties around Jackson for the past seven years and will continue to do this from our new location as well as distribute home and farm freezers, and packaged air conditioners.

W. F. BAUBIE

FIRM IN TURKEY SEEKS NEW LINES

Titan Ticaret Turk Limited Sirketi
Istanbul, Rustem Pasa Kutucular

Editor:

The purpose of this letter is to further advise that our company has taken as its chief aim to purchase and to sell on an exclusive basis refrigeration material and equipment and we are investigating in order to get in touch with a first-class make of world-wide renown but not yet represented on this market with a view to launch their product on an extensive basis.

You no doubt are best placed to assist us in this purpose and we would feel obliged for your giving our address to those firms which in your opinion might fulfill the above conditions. At the same time, would it be possible to insert our name in your magazine! To avoid loss of time, in case you find an important concern willing to cooperate with us, would you kindly ask them to contact us by telegraph to expedite matters as quickly as possible.

Looking forward to your favorable advice for which we thank you in advance, we remain,

TITAN TICARET TURK
LIMITED SIRKETI

ANOTHER SUGGESTION ON TRADE-IN PROBLEM

The Canton Hardware Co.
Canton 2, Ohio

Editor:

In your recent issue of AIR CONDITIONING & REFRIGERATION NEWS I noticed an article on page 6 by a dealer who fears the trade-in problem on electrical appliances.

Let me suggest to this dealer and to other dealers, that the OPA has solved that problem for the present. The revised Maximum Price Regulation 139 gives complete schedules of the maximum prices for all makes and models of electric refrigerators.

It seems to me that the only possible dealer policy will be to allow a trade-in not to exceed the "as is" price listed by the OPA. The dealer can then rebuild and recondition the refrigerator (if its condition warrants such work) and sell it for the maximum permitted by OPA for a reconditioned refrigerator with a 90 day guarantee.

Any dealer can obtain a copy of MPR 139 by writing to their OPA district office. I suggest that all dealers do this and adhere to the above procedure in handling trade-ins. In fact it would be my opinion (a purely amateur one) that if dealers allow more than the OPA schedule it would be violating the price regulation and they could be sued for damages by other dealers.

J. W. BROTHERS,
Executive Officer

EVOLUTIONARY IN ENGINEERING — REVOLUTIONARY IN DESIGN

Announcing

THE NEW

COOLSTREAM

Pressure Bubbler and Bottle-Type

ELECTRIC WATER COOLERS

Powered by Kelvinator and Built of the Highest Quality Materials, Coolstream Electric Water Coolers combine the finest engineering, newest designs, most attractive appearance and most sanitary operation with the greatest efficiency and lowest operational cost.

Coolstream Presents–

the *first* water cooler with a one-piece stainless steel cabinet and one-piece stainless steel top;

the *first* water cooler cabinet removable without tools;

the *first* water cooler with foot pedal which can be operated from sides or front of water cooler;

the *first* water cooler to provide sanitary protection against water from the mouth returning to the jet;

the *first* water cooler engineered to comply with the Bureau of Standards Regulations No. CS-127-45 and American Society of Refrigerating Engineers Bulletin No. 18;

the *first* Bottle-Type Cooler with a fully enclosed and refrigerated bottle.

Send for catalog

THE COOLSTREAM CORPORATION

55 WEST 42nd STREET · NEW YORK 18, N. Y.

Bowen REFRIGERATION SUPPLIES, INC.

Atlanta Jacksonville
Tampa Charlotte

"The South's Largest Refrigeration Supply Jobber"

AUDELS REFRIGERATION and AIR CONDITIONING GUIDE

JUST OUT! 4 Books in One!

Covering:
Basic Principles, Servicing, Operation, Repair of
1. Household Refrigeration
2. Special Refrigeration Units
3 Commercial & Industrial Refrigeration
4. Air Conditioning Systems

A gold mine of essential important facts for ENGINEERS, USERS AND SERVICEMEN.

Here you have at your fingers' ends a Complete Library in ONE VOLUME, the necessary data you have been looking for on: MODERN UNITS, SYSTEMS AND MACHINES. REFRIGERANTS. Including Freon, Quick Freezing, Lockers, Water Coolers & Air Conditioning Systems.

ANSWERS YOUR QUESTIONS.

1280 Pages, 46 Chapters all Fully Illustrated & Indexed for Ready Reference.

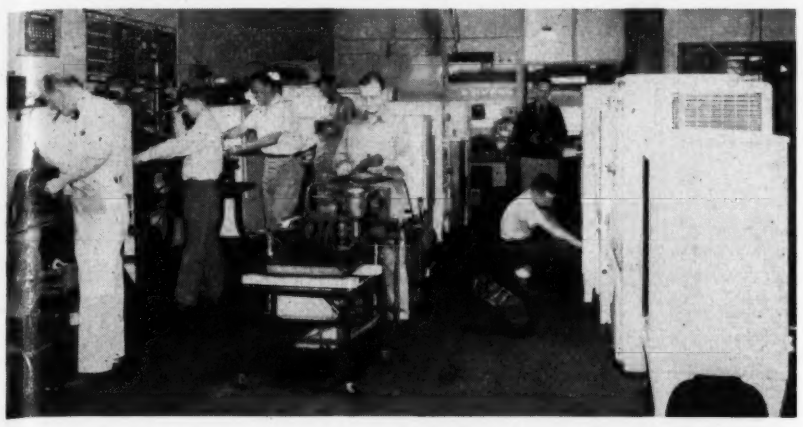
$4 COMPLETE • PAY ONLY $1 A MONTH

Get This Information for Yourself. Mail Coupon Today. No Obligation Unless Satisfied. ASK TO SEE IT.

AUDEL, Publishers, 49 W. 23 St., N. Y. 10
MAIL AUDELS NEW REFRIGERATION GUIDE for free examination. If O.K. I will send you $1 in 7 days; then remit $1 monthly until price of $4 is paid. Otherwise I will return it.

Name .....
Address .....
Occupation .....
Employed by R-13

Spacious Shop Allows for Several Repairmen



Hard at work in this popular St. Joseph, Mo., refrigeration and radio repair shop are (left to right) H. B. Cushman, E. O. Whitaker, Cleo Blodgett (partner), John Silgenbauer (partner), E. Richmond, E. R. Grace (who sells parts), and John E. Gastland (kneeling).

* * *

Fully Equipped Shop Helps St. Joseph, Mo., Firm Specialize on Refrigeration & Radio Repairs

ST. JOSEPH, Mo.—As a result of their reputation for possessing the most completely equipped repair shop in this city, Cleo Blodgett and his partner, John Stilgenbauer, rank high in the refrigeration service field here.

There are three distinct phases of the operation of Blodgett & Stilgenbauer, an eight-year-old firm: (1) a refrigeration repair division under the tutelage of Mr. Stilgenbauer; (2) a radio repair unit under Mr. Blodgett, from which the men derive a monthly gross of from $800 to $1,000; and (3) a wholesale refrigeration, washing machine, and radio parts section.

Direction of the parts department, which recently inventoried over $5,000, is in the hands of Gene Grace, who reports exceptional sales during the past few years in washing machine parts.

These three departments are currently the mainstays in the operation of the firm, but there are some concrete plans afoot to add a line of commercial refrigeration as soon as these can be stocked in sufficient quantity. Self-contained air conditioning units are also on the sales agenda here.

During the summer months of 1945, the men disposed of 40 coolers of the walk-in cooler type, and there have also been rapid sales in blower coils. The firm is an authorized General Electric service agency.

Consistent additions have been made in the refrigeration repair section, which has been granted the major share of the space in the 90-ft. long building, until today there are three service benches, a lathe, drill press, etc., and numerous testing accessories, allowing the men to service the machines which constantly roll into the shop for repair with the finest tools available.

The number of refrigerators on the floor at any time averages 20, and ranges from the small household variety to 15-ton units. Drive-in facilities at the rear expedite unloading of the machines.

A separate radio repair department also has excellent equipage and Mr. Blodgett has exercised his craftsmanship on a neat portion of the radio sets in the city of 85,000, with the aid of one experienced assistant. A signal generator, frequency modulator, two multi-meters, an automobile radio test panel, a full set of tube testers, are some of the items of equipment in this division of the shop.

Blodgett & Stilgenbauer boast of one of the most orderly wholesale parts departments in town, and the sales have been heavy to small repair shops. One young man is charged with the specific job of keeping this parts section in top-notch condition.

Top priority on refrigeration repair during the war was granted to owners of commercial units, especially where foodstuffs were involved. The men furnished a complete motor rebuilding service to a large portion of commercial box owners in this area. Because of their complete equipment, a majority of the furniture store retailers recommended them to patrons with defective units.

Motor repair constituted a heavy percentage of the refrigerator workmanship, and Mr. Stilgenbauer and cohorts offered the owners a complete motor repair service with the exception of motor winding.

Customers were urged to buy new motors, however, instead of having their units repaired or rebuilt, as it was emphasized that a new motor would give the most permanent satisfaction; but many of the patrons favored the firm's rebuilt service as is evidenced by the fact that there were 15 motors on the line for rebuilding at the time information for this story was being gathered.

An overwhelming majority of the household units brought in for servicing were suffering from dirt-clogged condensers and failure to oil the motors.

One of the wartime achievements of the firm was the job accomplished by Mr. Stilgenbauer on the large refrigeration system in operation at the commissary at nearby Rosecrans Field, an army field for training transport fliers.

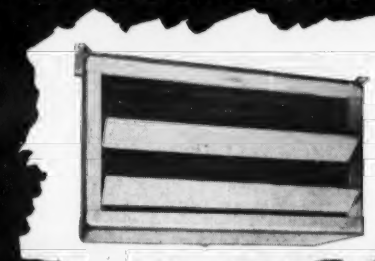
Taking a month's leave of absence from the duties of his own shop, Mr. Stilgenbauer managed a changeover in the operation of the Army field's refrigeration unit whereby two units could be utilized when necessary. If the load on one unit becomes too heavy, the other unit "kicks in" and picks up the excess load. His work on the refrigeration system of the Army field also made it possible to close the valves, cut one machine off completely, and throw the load on the other unit.

Every member of the repair force of this organization has had experience in his specific field of repair endeavors amounting to at least 15 years, and one of the radio technicians has had 18 years of radio repair servicing.

Prospects for sales of commercial units are bright as the units now serving the bulk of grocery stores, taverns, drugstores, and other retail outlets in the city are outmoded, the partners say. Meat retailers have also expressed a need to the men for modern commercial boxes and the expansion plans of some of these dealers in St. Joseph include facilities for much larger systems than the ones in operation during the war.

FOR BALANCED HUMIDITY!

O-KAY COILS are engineered to maintain moisture balance between air and products—to prevent dehydration. Designed and built by men who know your application problems. Write today for information.



O-KAY COILS

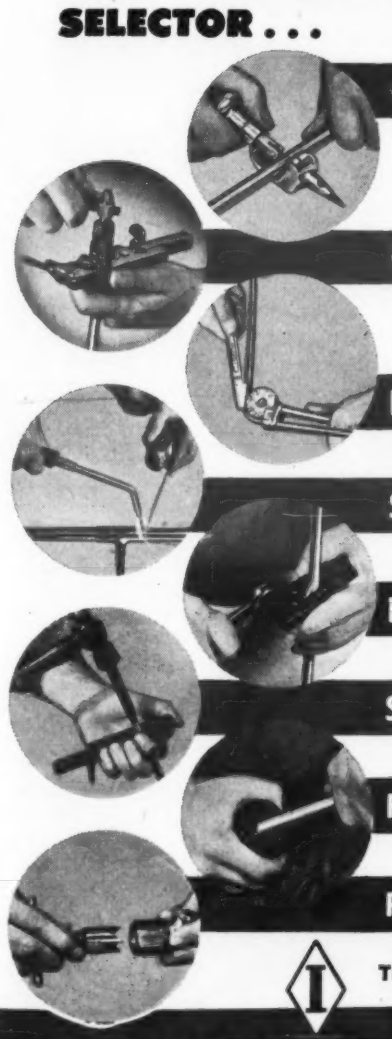
KAY PRODUCTS COMPANY • Division of Tyler Fixture Corp. • NILES, MICHIGAN

Speed your tubing connection work with Imperial Tools

The first step in any tube working job is to have good tube working tools—tools that are well-designed, well-made, durable and that make it easy to do *faster* and *better* work. Imperial makes tools like these—and no others. Whatever your tubing job may be, depend on Imperial—the tubing service line that's complete.

See your jobber.

USE THIS HANDY TUBE WORKING TOOL SELECTOR . . .



	SIZE TUBING SERVICED	SPECIAL FEATURES OR DESCRIPTION	CATALOG NUMBER
CUTTING	1/8" to 3/4"	Roller-type, with flare cut-off groove	174-F
	3/8" to 1 1/8"	Roller-type, with flare cut-off groove	212-F
	1/8" to 3/4"	Small, pocket-size cutter	127-F
	1/16" to 2 3/8"	Sawing vise	184-F
	1 1/2" to 4"	Sawing vise	185-F
FLARING	3/16" to 1/2"	Has quick slip-on yoke	193-F
	1/4" to 5/8"	Has quick slip-on yoke	195-F
	1/4" to 5/8"	Self-clamping type	295-FS
	3/16" to 3/4"	Wide range type	175-F
	3/16" to 1/2"	For smaller range of diameters	93-F
	1/4" to 5/8"	For smaller range of diameters	95-F
	3/4" to 1"	For larger sizes	103-F
	3/16" to 1/2"	For double-flaring metal tubing	93-FB
	3/8" to 3/4"	For double-flaring plastic tubing	175-FP
BENDING	1/4" to 3/8"	Set of 6 spring-type benders	101-F
	1/16" to 3/4"	Open-side bender. Positions anywhere on tube. Individual bender for each size	364-F
	3/8" to 3/4"	Heavy-duty bender outfit	360-F
SOLDERING	For use on all solder fitting work.	Outfit includes torch, 4 tips, soldering iron, 6 ft. hose and tank connections	32
PINCH-OFF	1/4", 3/8", 1/2"	Hex nut adjusters. Has holes for re-rounding tubing	105-F
SWEDGING	1/4", 3/8", 1/2", and 5/8"	For joining tubing without fittings. Kit includes flaring bar, 4 swedging tools, packed in steel case	195-S
	1/4" to 3/4"	Individual swedging tools—no bar	93-S
REAMING	3/16" to 1 1/2"	For reaming both inside and outside edges of tubing	208-F
REFACING	1/4" to 3/8"	Tool for refacing S. A. E. flare seats which have become nicked or marred. Includes cutter, 5 adapters	98-F

THE IMPERIAL BRASS MFG. CO., 565 S. Racine Ave., Chicago 7, Ill.

IMPERIAL

FITTINGS • VALVES • DEHYDRATORS
FILTERS • FLOATS • CHARGING LINES
TOOLS FOR CUTTING, FLARING, BENDING, COILING, PINCH-OFF AND SWEDGING

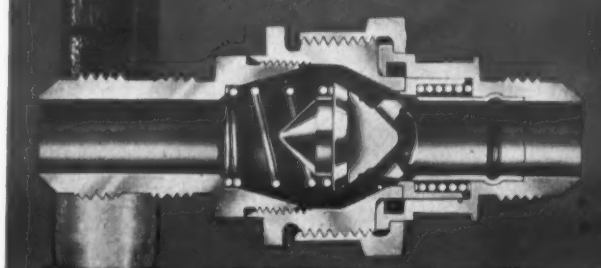
TWO MAJOR WAR DEVELOPMENTS

now ready for industry

1. Aeroquip Hose Lines * with detachable and reusable fittings simplify the supply problem and save valuable time, thus helping our armed forces on all fronts.

3 PIECES (each replaceable)

Assembly without special tools. No tightening or adjustment after assembly. Fittings can be removed from hose and reused over 100 times.



2. Aeroquip Self Sealing Couplings * allow disconnection of liquid carrying lines without loss of fluid and reconnection without inclusion of air.

STANDARD EQUIPMENT ON U. S. ARMY AND NAVY COMBAT AIRCRAFT

AEROQUIP CORPORATION

JACKSON, MICHIGAN, U. S. A.

Refrigeration Problems
And Their Solution

By P. B. Reed

For Service and Installation Engineers

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Recording Suction Pressure Gauge (1)

The service man's most important tools in diagnosing the symptoms of trouble with a refrigerating system to determine the cause, are his suction and discharge pressure gauges.

Of the two, the suction pressure gauge is the most used and more often gives him the clue to the trouble. It is as revealing on the idle cycle as while the condensing unit is running, for if properly used and interpreted, it points out leakage of discharge or suction valves, leakage of the expansion valve or float valve, as well as low-on-charge, stopped strainer, moisture in the system, weak power element of the thermostatic expansion valve, and other troubles that beset refrigerating equipment.

It is rarely safe to repair what seems to be an obvious fault, such as motor trouble, broken belt, blown fuse, etc., without putting on the gauges and checking further, for there may have been an underlying cause of these effects.

TIME LOST IN WATCHING THE EQUIPMENT FOR SYMPTOMS

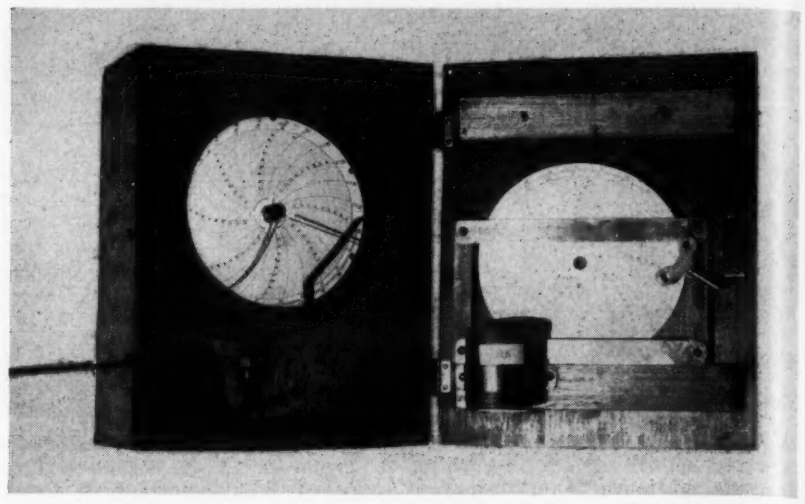
A good deal of time is used up simply watching the gauges through a few cycles to determine the cause of the trouble, and then after repairs are made in "wasted" time, watching the installation and the gauges to make sure that the equipment is repaired, properly readjusted, and working at its best efficiency.

RECORDING PRESSURE GAUGE DOES THE WATCHING

There is a tool that greatly reduces the time lost and at the same time makes it far easier for the service man to analyze and diagnose the symptoms. It is a recording gauge obtainable either in the compound type for general suction pressure use; a low pressure type also for use as a suction pressure gauge, but on systems that never operate on a vacuum; and the higher pressure type for use in recording the discharge pressure.

These gauges are fairly expensive, running from $50 to $90 apiece, but each service man should have one in his kit of tools, for it can pay for itself in a few months in time saved.

Fig. 1--Recording Gauge Mounted in Case



Invaluable to the service man, the recording suction pressure gauge should be mounted in a box, such as shown above, which can be locked. Spare charts, ink, and the clock key are also carried in the case.

DIAGNOSING TIME OFTEN EXCEEDS REPAIR TIME

It is not unusual for the time spent in diagnosing the symptoms and locating the source of the trouble, to be much greater than the actual time used in making the repair itself.

Moreover, the chart in black and white shows the accumulated story and the trends that enable the service man to better understand what is going on than if he kept his eyes glued to the gauges.

THE CHART AS A RECORD

A chart from a recording suction pressure gauge makes a fine addition to the file record, particularly in case of any controversy with the user as to whether or not the job was properly repaired. Some service men make it a practice to take at least one 24 hour suction pressure chart on every new installation, to keep in their files as proof of proper original operation and also to enable them to compare future operation with that when the installation was first completed.

Recording pressure gauges are available in many different ranges of pressures, sizes of chart, and time covered by the chart. They are also available either with hand-wound or electric clock movement, but the most practical for the field service man is the hand-wound clock movement type as an electric outlet is not always conveniently available. A gauge with a 10-in. chart is sufficient for accuracy and is more readily portable than a gauge using a 12-in. or larger chart.

The shorter the time the chart covers, the more accurately it can be read. It is desirable to be able to distinguish the operation of the valves with some accuracy, but the cycles are so crowded together on a seven-day chart that they do not give much of a picture. A 24-hour chart is sufficiently accurate and covers enough time to be practical.

For a recording suction pressure gauge for general use the chart should have a range of 30 in. of vacuum to about 50 p.s.i. pressure, with the vacuum readings on the outer portion of the chart. Thus the most practical recording suction pressure gauge would have a hand-wound 24-hour clock with a 10-in. chart calibrated from 30 in. to about 50 p.s.i.

It should have a hinged cover with hasp for a small padlock and should be equipped with a connection for a ¼-in. flared tube. Preferably the connection should be equipped with a restriction to prevent violent swinging of the needle.

It is sometimes desirable to lock the instrument to keep unauthorized persons from tampering with or damaging it. Moreover, it may sometimes be advisable to keep the user from seeing the chart. A case such as that shown in Fig. 1 may be locked and in addition protect

(Concluded on next page)

Member of the National Refrigeration Supply Jobbers Association

Your refrigeration parts and supply house in Central New York and Northern Pennsylvania

TED GLOU

CENTRAL SERVICE SUPPLY CO.

516-18-20 E. Erie Blvd.., Syracuse, N. Y. Phone 5-4000
209-211 Jefferson Ave., Scranton, Pa. Phone 3-4000

Mills direct drive compressors

TOMORROW, YOUR COMPRESSORS CAN BE

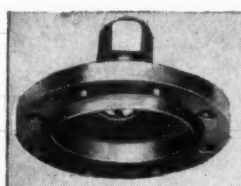
serviced in the field

Smaller, lighter, more compact than any other type of compressor (including hermetics), the new Mills ⅓ H. P. Direct Drive Unit eliminates factory returns. It is completely and easily adjusted or repaired in the field.*

* Even if our limited initial production will not permit us to meet your current requirements, we will be happy to supply you with all details for future consideration.

MILLS *Industries, Incorporated*

Refrigeration Division 4100 Fullerton Avenue · Chicago 39, Illinois



MOISTURE? SEDIMENT? ACID?

YOU Name the Problem

DFN Provides the Solution

DFN Cartridges Available for Every condition of Moisture, Sediment, Acid!

Since DFN Cartridges are interchangeable, you can quickly alter cartridge charge of a DFN Shell to combat aggravated moisture, sediment and acid conditions. Simply select correct DFN cartridge for High Moisture . . Acid-and-Moisture . . Sediment-and-Sludge . . Sediment-and-Moisture . . or Sediment. When the temporary problem is licked, return to standard DFN Cartridge, which handles normal moisture, sediment and acid in one unit.

Besides its unique flexibility, the DFN System provides: 1. full strength dehydration—cartridges are mechanically packed, hermetically sealed. 2. low-cost maintenance—DFN Shells stay on for repeated use. Inexpensive Cartridges are replaced; 3. less servicing—stays on the job longer because it holds more moisture, sediment and sludge; 4. faster servicing—cartridges are easy to install. Ask your distributor or write us for Catalog R-7.

WIRE MESH PRODUCTS
MONEL • BRASS
BRONZE
Refrigerant, Oil and liquids and Gases Fabricated to specifications

McINTIRE CONNECTOR CO., Newark 5, N.J.

Only the **DFN** SYSTEM DEHYDRATES FILTERS NEUTRALIZES

DEHYDRATORS • STRAINERS FILTERS • NEUTRALIZERS

Fig. 2--How Chart Aids In Analyzing Complaints

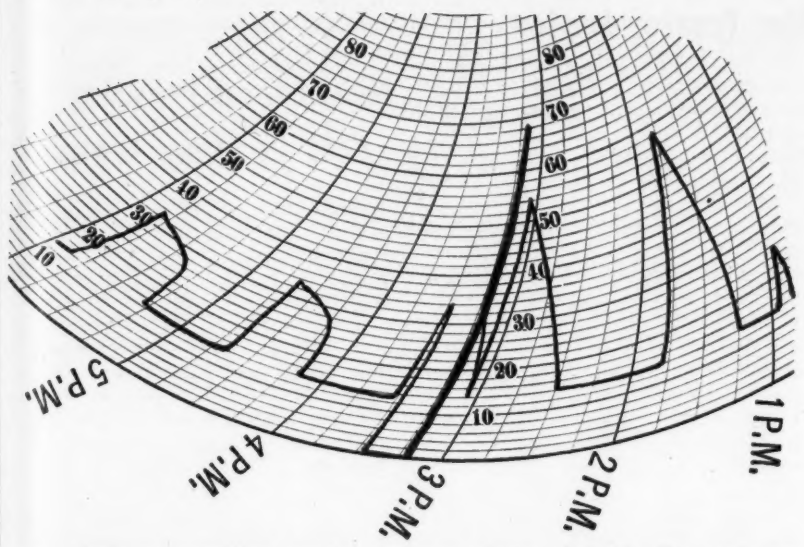


Chart from a recording suction pressure gauge showing the operation before and after correction of a "motor trouble" complaint.

Recording Gauge--

(Concluded from preceding page)

the gauge and provides a place for the key, ink, and spare charts.

HOW TO USE THE RECORDING PRESSURE GAUGE

In construction, the recording gauge is much like the ordinary indicating gauge, except that the dial (the chart) revolves, and the needle (the pen) stays stationary.

To use, the gauge is connected as usual, with the pen lifted from the dial face, the clock is wound with the key, a chart is put on loosely, the pen let down until it almost touches the chart but does not, and the chart rotated until the time of day at which the gauge is put on appears on the chart just under the pen point. The center thumb nut is tightened, securing the chart to the face. The pen is then filled with ink and let down to the chart and the cover closed.

Always mount the recorder on the floor or on a wall that is not subject to vibration. Use a long connecting tube with a vibration loop in it. Always use the special, slow drying ink.

Keep the pen clean; if necessary clean it out occasionally with the sharp point of a knife. New pen points may be put in when required. When moving the recorder, keep the pen lifted from the face. Check the gauge for zero accuracy often and occasionally by a master gauge.

AN EXAMPLE OF THE USE OF THE RECORDING GAUGE

Service man "A" received a service call on a small storage type water cooler using methyl chloride, and equipped with automatic expansion valve and thermostat. The complaint was that it made a lot of noise and the motor seemed to labor in starting. Also, it had blown a fuse or two.

He made the call right after he had his lunch, arriving at about 12:30. He found the unit running and refrigerating very satisfactorily. He stopped it by pulling the electric plug and it started again quite readily when he plugged it back in a few minutes later.

He had a more urgent call so he put on a recording suction pressure gauge at 12:45. He noted that the running suction pressure was 14 p.s.i., which was right for methyl chloride for that cooler. In order to test it again he then stopped the unit for about five minutes, but plugged it back in just before one o'clock. The pressure rose about normally to 26 p.s.i. by the time he plugged it back in. Again it started without difficulty.

He made his urgent call on a walk-in refrigerator that was down and waiting for him, but dropped in to see the water cooler on his way back to the shop. He found from the chart shown in Fig. 2 that the unit ran about 15 minutes after he left but stopped at 1:15.

The chart showed that the pressure rose to 59 p.s.i. before the temperature control called for refrigeration and started the condensing unit at a little after 1:45. The motor had picked up the load and the condensing unit ran normally for about 40 minutes, cutting off again at 2:30 to remain off until about 3:05, when it started again just as he came in.

It was evident that the motor trouble was due to overload resulting from the high suction pressure at the start of the run, which was in turn caused either by leakage past the needle of the automatic expansion valve or leak-back of one or both of the discharge valves in the compressor.

He stopped the condensing unit and watched the suction pressure go up. To check whether it was due to the discharge valves or the expansion valve, he quickly ran in the suction service valve. This closed the suction line off from the compressor but left the recording gauge indicating the compressor crankcase pressure. The gauge reading continued to rise, showing that the discharge valves were leaking.

He then closed the discharge service valve and removed the plug from the service port of the valve, thus purging the compressor pressure down to zero gauge. He removed the compressor head, cleaned up the valve plate with No. 320 wet-or-dry sandpaper, put in new valve leaves and gaskets and reassembled.

He cracked the suction service valve to purge the cylinders and head, replaced the plug in the discharge service valve, opened the discharge and suction service valves and again started the condensing unit. By this time the suction pressure was up to 34 p.s.i., but it quickly dropped to 14 p.s.i.

To be sure that everything was right he left the recording gauge on and at 3:40 left to go to another job. On his way back to the shop he dropped in and found that the unit had cycled twice with the suction pressure rising to a normal of only about 32 or 33 p.s.i.

By changing the discharge valves he had corrected the job without spending very much more time on the job than it took to actually change the valves. Very little time was lost in watching the operation during the running and idle cycles, to determine the source of the trouble.

A recording suction pressure gauge reveals many other operating conditions such as frequency and length of the running and idle cycles, percentage of running time, character of refrigerant feed, balance between condensing unit and coil capacities, correct pressure or temperature control settings to obtain desirable length and frequency of the cycles of operation, and many other characteristics that are discernible from a study and analysis of the suction pressure curves.

(To Be Continued)

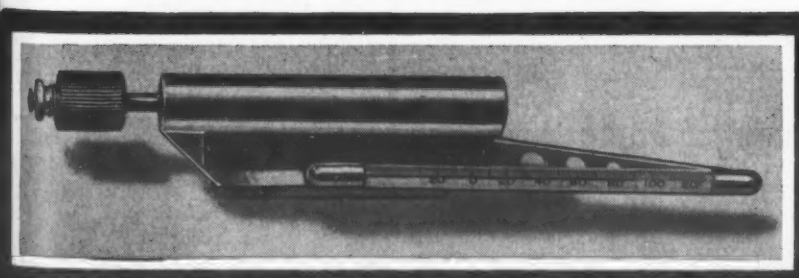
YOU MAY HAVE TO MAKE AN EXTRA TRIP
. . . SO ALWAYS TAKE ICE-X ALONG!

ICE-X quickly cures emergency freeze ups when ice forms at the expansion valve or capillary tube. Harmless to use. Great for Freon, Carrene, or Methyl Chloride systems . . . The dependable liquid anti-freeze.

ORDER FROM YOUR JOBBER OR—

EXCLUSIVE NATIONAL DISTRIBUTOR
THE HARRY ALTER CO. 1728 S. MICHIGAN AVE. CHICAGO 16, ILLINOIS
JOBBERS: WRITE FOR SPECIAL PROPOSITION!

THE *QUICK-CHECK-UP* INSTRUMENT
for every
SERVICE AND SHOP MAN



THERMOSTATIC CONTROL TESTER
the instrument that detects control defects

features

1. Indicates quickly cut-in and cut-out temperature.
2. Does not require removal of control from cabinet.
3. Eliminates un-warranted tampering with thermostatic controls.
4. Shows customer defective part.
5. Scientifically designed for easy operation.
6. Excellent shop tool for adjusting controls.

(MODEL A100) $19.50

Complete with pocket case, instructions and bulb adaptor. Ready for use. Fully guaranteed.

ORDER DIRECT OR SEE YOUR JOBBER

AIRCRAFT SERVICE COMPANY
435 MELWOOD STREET • PITTSBURGH 13, PA.
Jobber Inquiries Invited

YOU'LL ALWAYS GET
CLEANLINESS
. . . IN WOLVERINE TUBING
. . . TOGETHER WITH
DRYNESS, UNIFORMITY
AND EASY BENDING

WOLVERINE
TUBE DIVISION
CALUMET & HECLA CONSOLIDATED COPPER COMPANY
1411 CENTRAL AVENUE • DETROIT 9, MICHIGAN
In Canada: UNIFIN TUBE CO., LONDON, ONT.

FOOD MUST BE CONSERVED

Refrigeration today is performing a vital service by guarding and preserving for future use, priceless food which might otherwise be wasted. Write for literature.

GENERAL REFRIGERATION DIVISION

Yates-American Machine Co. Beloit, Wis.

What's New

Day & Night Develops Line of Cold Plates

MONROVIA, Calif. — Complete packaged water cooler units, and "Flash Kold Sheets" designed to replace fin coils are two new products developed by Day & Night Mfg. Co. during the war.

According to R. O. White, manager of the Day & Night cooler division, the new packaged water cooler unit soon to be introduced to the trade will be the first of its kind offered by the firm.

"Flash Kold Sheets" are claimed to offer greater effective cooling surface, lower cost, and space-saving installation advantages.

These units will be made in sizes adapted for use in locker and food processing plants, deep freeze, and beverage dispensing cabinets, and commercial refrigerators of all types, according to Mr. White.

Previously and during the war period, Day & Night manufactured low sides and cabinets for drinking water coolers and tank coolers.

100 Ft. Amana Cooler Has Freezer Section

AMANA, Iowa — A new self-contained freezer-cooler, known as the Model 200 Freezer-Cooler, containing 100-cu. ft. storage space and 23-cu. ft. freezer space, has been announced by the Amana Society.

This freezer, which can be used in homes, on farms, in food stores, hotels, restaurants, estates, institutions, and ranches, is 8 ft. long, 4 ft. deep, and 6 ft. 10 in. high.

It has a heavy duty super-powered compressor with ¾-hp. single phase motor for either 110 or 220 volts. The cooler section holds a temperature of 36° to 40° F., the company says.

It is equipped with meat rails and adjustable hooks, slatted shelves for butter, cheese, beverages, and other foods, and has a lower storage compartment with space for cooling milk and cream in cans, cases of eggs, etc.

Interior lighting illuminates the freezer compartments as well as the cooler section.

The freezer unit with compressor and forced air cooling unit is shipped separately, and the floor, walls, and ceiling of the cooler section come in factory pre-fabricated sections ready for erection by bolting all sections together, the company says.

New Faucet Provides Cold Drinking Water

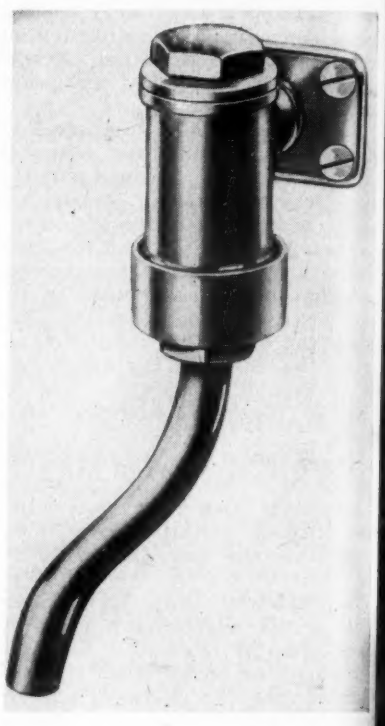
NEWARK, N. J.—A special type faucet that will provide fresh cold running water direct from a refrigerator box has been announced by the Economy Faucet Co. here.

The faucet and an internal cooling coil comprise the entire assembly. The spout operates on a swivel attached to the side of the box, delivering water as soon as the spout is swung out from its compartment. Turning it to the left again shuts the water off completely—no drip, the company claims—leaving it flush with the outside paneling.

The device saves space within the refrigerator, avoids the flat taste of stored water, and saves electricity, gas, or ice, as the case may be, ordinarily wasted in continuously opening and closing refrigerator doors.

It may be installed on present boxes, the company says, and is available also to manufacturers for new refrigerator models.

* * *



All-Metal Louver Ventilates Attics

CHICAGO — A new all metal louver, called the "Airway," is being manufactured by the Firecraft Corp., 3319 South Wallace St., here.

Designed to be mounted either in the wall of attics or in the roof, it provides air circulation for the protection of insulation against mold and deterioration as well as providing ample space ventilation.

Made of 24 gauge steel with full deep louvers so that rain and sleet cannot enter, the Airway Vent is available in six sizes— 8 x 8 inches up to 18 x 24 inches. It also comes in a hooded type for roof installation.

Imperial Folder Lists Tools For Tubing

CHICAGO—A new folder on tubing tools, designated as No. 347, was recently published by the Imperial Brass Mfg. Co. here.

Featured is a tube-working tool selector. Tools for use with copper, brass, aluminum, thin-wall steel, and similar tubing are indicated by the tool selector.

Flaring tools, tube cutters, tube benders, coil makers, pinch-off tools, swedging tools, reamers, refacing tools, and soldering equipment are also included, plus illustrations of a number of tool kits.

'Axiaflo' Pump Line Added by Ruthman

CINCINNATI — A new line of "Axiaflo" circulators, designed for handling a large volume of liquid at low heads with minimum power requirements, has recently been announced by the Ruthman Machinery Co. here. The units are equipped with full ball bearing, totally enclosed, dynamically balanced motors.

Available sizes include the 4 inch, equipped with ¼-hp. motor and the 6 inch with ½-hp. motor. The discharge capacities are 280, 700, 950, and 1,200 gallons per minute. Other sizes will be added when required, including the 10 and 12 inch with capacities up to 2,500 gallons per minute.

The "Axiaflo" pumps included in a new condensed catalog which will be furnished upon request by writing to the Ruthman Machinery Co., 1810 Reading Rd., Cincinnati 2.

Ranco Controls

EASY TO INSTALL
INSTRUMENTS OF ACCURACY
RUGGED CONSTRUCTION

Simplicity of design makes Ranco controls quick and easy to install—saves the service man time.

Ranco controls are accurate because they are precision inspected at each step of fabrication and assembly.

Built of finest materials selected for beauty and durability, these controls are rugged beyond the most severe demands.

For profits, install Ranco controls. See your jobber or write direct.

Type O Commercial Control

Ranco Inc. COLUMBUS 1, OHIO

PLAN ON PRODUCT IMPROVEMENT

Count on Kold-Hold to help you build those new, improved products designed to meet the demand of an expectant market. The new Kold-Hold principle of refrigerant flow will help you to attain fresh standards of efficiency and economy. Under this principle, the Serpentine Plates utilized on Kold-Hold liners and plate stand units are fabricated into complete liners and shelves with all refrigerant joints eliminated and without interruption to flow.

This assures you these advantages: maximum prime surface; highest rate of plate heat acceptance obtainable with natural convection low sides; minimum pressure drop; freedom from oil logging because the refrigerant circulates freely from inlet to outlet; no chance for short circuiting of the refrigerant; maximum K factor. Locker plant owners are finding the plate stand units especially adaptable to the standard depth freezer cabinets.

Individual Kold-Hold Serpentine Plates, completely fabricated plate stands and cabinet liners are now being supplied to many manufacturers of ice cream cabinets, frozen food cabinets, milk coolers and farm freezers. Write today for additional information and prices on the equipment for your needs.

KOLD-HOLD

KOLD-HOLD MANUFACTURING CO.
500 N. GRAND AVE. LANSING 4, MICH.

In the West it's
REFRIGERATION SERVICE INC.
Pacific Coast Supply Jobber since 1928
Your letterhead will bring our latest catalog—also our House Organ,
"The Liquid Line"
3109 Beverly Blvd.
LOS ANGELES 4, CALIF.

452 FOURTH AVE., NEW YORK, N. Y
Specialists on drinking water equipment for 50 ye

REFRIGERATION
PARTS AND SUPPLIES
FOR ALL MAKES Write for Catalog
THE HARRY ALTER CO.
1728 S. Michigan Ave. Chicago, 16, Ill.
Two Big Warehouses to Serve You
134 Lafayette St. New York, 13, N.Y.

Westinghouse Officials Inspect 1946 Refrigerators

T. J. Newcomb, sales manager of the Westinghouse Electric Appliance Division, right, and G. H. Meilinger, manager of the household refrigeration department, listen with interest as P. J. Backman, production superintendent, left, points out assembly line practices for manufacture of the new, improved 1946 model Westinghouse refrigerator. This is the end of the assembly line where the refrigerator—known as the B-7—is crated after final inspection.

* * *

Westinghouse--

(Concluded from Page 1, Column 4)

erage storage, and additional space for frozen foods."

The frozen food compartment in the freezer or evaporator of the new refrigerator is two thirds larger than in the last prewar model and will hold 10 pounds of frozen food.

The B-7 model has an anodized aluminum crisper pan for the storage of vegetables and this light, easy to clean metal also is used on the door of the freezer and for ice cube and dessert trays.

The crisper tray fits snugly against the top glass cover and is mounted on rollers to facilitate gliding in and out. Tests by the Westinghouse Home Economics Institute showed that these tight fitting, light metal pans keep vegetables crisper and fresher over long periods of time, the company claims.

To maintain safe refrigerating conditions, the temperature control is located at the base of the refrigerator door within easy reach and is marked off in degrees of temperature, enabling the housewife to select safe temperatures for all types of food.

The aluminum ice cube and dessert trays—they make 84 ice cubes at a time—come equipped with "selecto-cube" ice forming grids from which one ice cube at a time can be taken.

Up to 15 pounds of meat can be stored in the smartly styled vitreous enamel meat keeper in the new refrigerator. This pan slides under the freezer and is easy to move when packed with meat, it was said.

Changes in the interior arrangement of the shelving—by moving the freezer off-center—have been designed to increase the storage utility of milk bottles, mason jars, and tall bottles.

"The rearranged interior now allows enough space by the freezer to store eight square quart size milk bottles on one side," Mr. Meilinger said. "In addition, the flexible shelf arrangement adds to the convenience of the interior."

Rema Meetings--

(Concluded from Page 1, Column 5)

will talk on "OPA—Its Price Regulations For Reconversion and Postwar."

Following this there will be talks on "The Public Relations Program, Its Work and Results to Date," by Theodore Sills of Sills, Inc.; and "Our Enlarged Credit Program," by F. K. Zimmerman of Lynch Mfg. Co.

K. B. Thorndike, Detroit Lubricator Co., chairman of Rema's Show committee, will speak on "Our All-Industry Show." Mr. Thorndike's remarks will be of greater interest than ever to members following announcement last week that the locker plant industry convention and show will tie in with the Rema-sponsored All-Industry Refrigeration & Air Conditioning Exhibition, scheduled to be held in the Cleveland Public Auditorium the last week of October of next year (1946).

The sessions on Friday, Nov. 9 will be devoted to sales management problems. P. A. Karl, Brunner Mfg. Co. will address the group on "Exports—A Postwar Possibility and Some of the Present Sales Problems." F. F. Censky, manager, Postwar Planning Division, Firestone Tire & Rubber Co., will speak on "American Industry Looks Ahead."

Gene Robers, The Weatherhead Co. will talk on "How To Work Out a Postwar Advertising Program." George R. Allen, Kerotest Mfg. Co., is to speak on a subject to be announced later.

After W. H. Maxwell of Wolverine Tube speaks on "Control and Operation of Field Sales Force," there will be an open forum on the subject.

Final talk on the Friday session will be one by Jack Klein of Klein Institute of New York on "Analyzing Salesmen by Aptitude Tests."

G-E Prices--

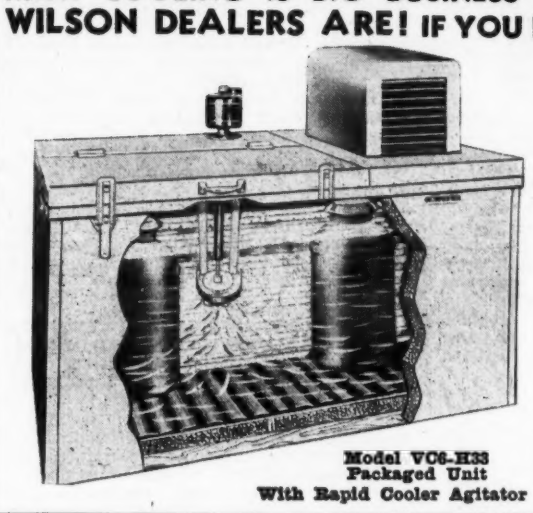
(Concluded from Page 1, Column 4)

in newspapers, magazines, and over the air."

Postwar national prices on all its appliances will probably be announced by G-E in the near future, after approval is obtained from OPA, said Mr. Pritchard.

Cost of delivery and Federal excise tax will be included in the nationally advertised prices, but state and local taxes will be omitted.

MILK COOLING IS BIG BUSINESS . . . . ARE YOU GETTING YOUR SHARE?
WILSON DEALERS ARE! IF YOU HAVE MODERN SALES AND SERVICE, WRITE NOW.



Model VC6-H33 Packaged Unit With Rapid Cooler Agitator

WILSON

SYSTEMS OF MILK COOLING

A TYPE FOR EVERY REQUIREMENT

3. Verti-Coil with RAPID-COOLER AGITATOR

- The Wilson Verti-Coil Cooler equipped with the RAPID-COOLER AGITATOR (Pat.) WILL COOL TWICE THE CABINET CAPACITY DAILY WITH EXTREME RAPIDITY.
- ALL WILSON MILK COOLERS ARE NOTED FOR: RAPID AND UNIFORM COOLING. MAXIMUM COOLING EFFICIENCY. LOW COST OF OPERATION. LIFE-TESTED CONSTRUCTION.

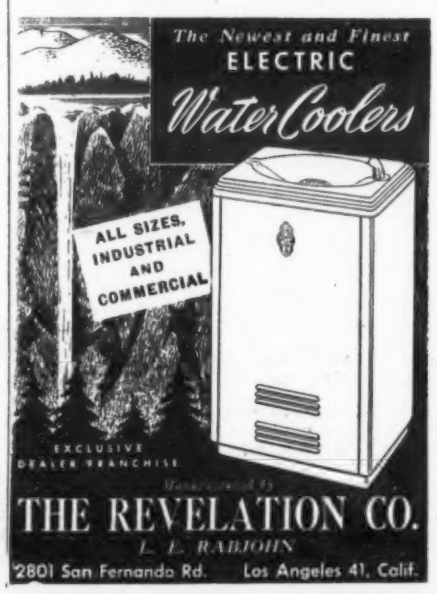
WILSON REFRIGERATION, INC. SMYRNA DELAWARE
DIVISION WILSON CABINET CO.

"RECOLD"
WATER DEFROST
"RECOLD" COILS WATER-DEFROST
U. S. PAT. 2,218,393
REFRIGERATION ENGINEERING Inc.
LOS ANGELES • CALIFORNIA

HEAT TRANSFER EQUIPMENT
MARLO
COIL COMPANY
SAINT LOUIS, MISSOURI

Complete Line of
HERMETIC
Self-Contained OPEN TYPE
and REMOTE TYPE
Refrigerating Units
⅛ TO 20 H.P.
UNIVERSAL COOLER
MARION OHIO BRANTFORD ONTARIO
WE SELL TO MANUFACTURERS ONLY
UNIVERSAL COOLER CORPORATION
Automatic Refrigeration since 1922

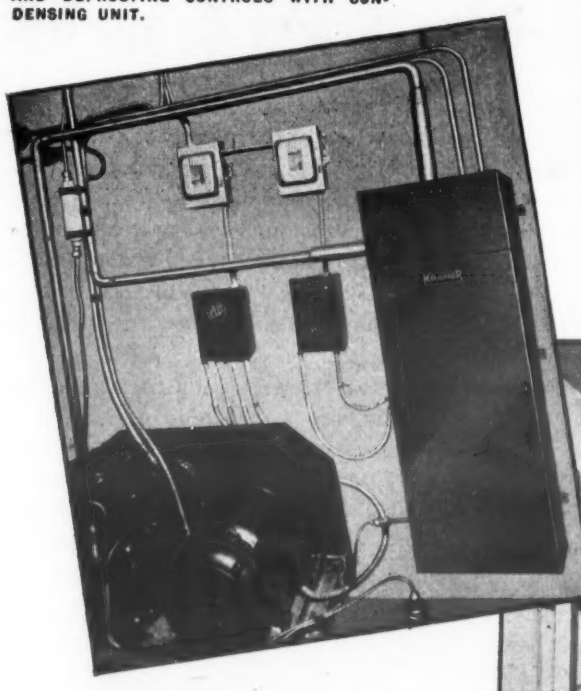
EASY
TO USE!
Another reason why so many service-men all over the country do their buying through the
NEW 1945
AIRO
Wholesale
CATALOG
of
Refrigeration and Air Conditioning
PARTS - TOOLS - SUPPLIES
Send for your copy TODAY
AIRO SUPPLY CO. (NOT INC.)
WHOLESALE ONLY
2732 N. Ashland Ave., Dept. B
Chicago 14, Illinois



Manufactured by
THE REVELATION CO.
L. L. RABJOHN
2801 San Fernando Rd. Los Angeles 41, Calif.

THERMOBANK
by
KRAMER

INSTALLATION SHOWING THERMOBANK AND DEFROSTING CONTROLS WITH CONDENSING UNIT.



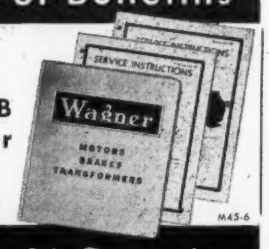
With the Thermobank a low temperature system is just as automatic as a 40° system.

NO ELECTRIC HEATERS
NO BRINE SPRAY
NO WATER SPRAY

THERMOBANK EVAPORATOR INSTALLATION IN MINUS 20° F. ICE CREAM HARDENING ROOM.

Write for Bulletin T-V-345N

KRAMER TRENTON COMPANY
Trenton, New Jersey



Send For Bulletins

MU-185, MU-30B, and MU-7B on Wagner ELECTRIC MOTORS

Wagner Electric Corporation
ESTABLISHED 1891
6471 Plymouth Avenue, St. Louis 14, Mo., U. S. A.
ELECTRICAL AND AUTOMOTIVE PRODUCTS

Canadian Refrigeration Journal

The only publication servicing the industry in Canada

National Business Publications Limited
Gardenvale, Que. - Canada

PURO ELECTRIC WATER COOLERS

BRANCHES IN PRINCIPAL CITIES
MAIN OFFICE
440 LAFAYETTE ST.
New York 3, N. Y.

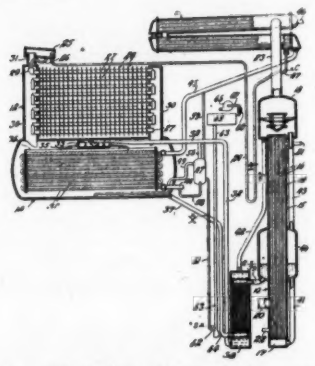
PURO FILTER CORP. OF AMERICA

DRINKING WATER SPECIALISTS FOR 40 YEARS.

PATENTS

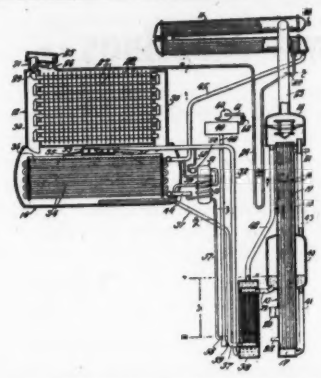
Weeks of Sept. 18 & 25

2,384,860. REFRIGERATION. Albert R. Thomas, deceased, late of Evansville, Ind., by the National City Bank of Evansville, Ind., administrator, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application April 1, 1943, Serial No. 481,442. 16 Claims. (Cl. 62—119.)



3. An absorption refrigeration system having a generator and condenser operable at one pressure and an evaporator and absorber operable at a lower pressure, means interconnecting the elements to provide a closed circuit for the circulation of a refrigerant and absorbent and maintain the pressure differential, said last named means providing separate paths of flow between the generator and absorber for absorption liquid weak in refrigerant and absorption liquid strong in refrigerant, a bypass connected between the separate paths of flow to cause a flow of absorption liquid therebetween, and means in the bypass utilizing the flow of absorption liquid therein for withdrawing non-condensible gases from the system and storing the gases.

2,384,861. REFRIGERATION. Charles Alfred Roswell, Newburgh, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application April 2, 1943, Serial No. 481,519. 12 Claims. (Cl. 62—119.)



1. A refrigeration system operable below atmospheric pressure and comprising a plurality of parts including a first absorber interconnected for circulation of absorption liquid and refrigerant, and means including an auxiliary absorber for withdrawing non-condensible gases from said first absorber, said auxiliary absorber comprising a casing providing a chamber within which is disposed an upright annular member, a helical member fitting snugly about said annular member in direct contact therewith and extending lengthwise thereof, and means to flow absorption liquid onto an upper part of said helical member, said annular member and helical member forming a path of flow for absorption liquid in which liquid descends from one turn of said helical member onto a part of said annular wall and from the latter onto the next successively lower turn of said helical member, so that fresh liquid surfaces are constantly being provided with which non-condensible gases from said first absorber come in contact for removing refrigerant vapor accompanying such gases.

2,385,033. REFRIGERATION UNIT FOR INTERNAL-COMBUSTION ENGINES. Henry G. Schwarz, Marshallton, Del. Application Sept. 20, 1941, Serial No. 411,629. 2 Claims. (Cl. 123—174.)

1. A refrigeration system for use in association with an internal combustion engine comprising, in combination, a heat interchanger adapted to receive a liquefied medium, an absorber containing an adsorbent for the refrigerating medium, a condenser interposed between said heat interchanger and said absorber, the inter-

(Concluded on next page)

Listen to the Human Adventure on the Mutual Network every Wednesday evening, 10 to 10:30 P. M., Eastern Time

The green light in metals... Revere has them NOW

Revere knows well how precious to the nation each of these post-war days can be, and how crippling to industry and employment could be a shortage of essential metals. That is why, since V-J Day, Revere has been in full production for peace.

Fortunately, Revere metals can serve the needs of creating as well as those of destroying, can make as fine bathroom fixtures as bomb fuses, as excellent radiators for automobiles as for half-tracks. No difficult reconversion problems have stifled the outpouring of Revere metals.

Revere copper, brass, bronze, aluminum, magnesium, steel, are ready *now*, are already busy in thousands of plants helping shorten the period of reconversion for industry and for the nation.

We are able and eager to do more. One inevitable result of Revere's war effort has been that not only our ability to produce, but our ability to give service, have been expanded many times. Revere research has probed further and deeper. Revere Technical Advisors are armed with greater knowledge and experience. New methods, metals and machines may save precious time or cut all-important cost for users of our metals.

In all these ways Revere is ready *now* to serve the manufacturing and building industries to help you prove *immediately* that America is even greater in peace than she proved to be in war. In the same way Revere is ready to serve home owners with its building products which are stocked by Revere Distributors in all parts of the country.

REVERE COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

Executive Offices: 230 Park Avenue, New York 17, N. Y.

Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.; New Bedford, Mass.; Rome, N. Y.

Sales Offices in principal cities, Distributors everywhere

Revere District Sales Offices are located in the following cities:

Atlanta, Ga.	Boston, Mass.	Buffalo, N. Y.
Cincinnati, O.	Cleveland, O.	Dallas, Texas
Dayton, O.	Grand Rapids, Mich.	Hartford, Conn.
Houston, Texas	Indianapolis, Ind.	Los Angeles, Calif.
Milwaukee, Wis.	Minneapolis, Minn.	New York, N. Y.
Philadelphia, Pa.	Pittsburgh, Pa.	Providence, R. I.
St. Louis, Mo.	San Francisco, Calif.	Seattle, Wash.

The Revere Office nearest you is at your service.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $2.50 per insertion. Limit 50 words.
RATES for all other classifications $5.00 per insertion. Limit 50 words.
Advertisements set in usual classified style. Box addresses count as five words, other addresses by actual word count.
PAYMENT in advance is required for advertising in this column.

POSITIONS WANTED

AVAILABLE SEPTEMBER 15, 1945. An experienced refrigeration, air conditioning, and heating service engineer with a successful record of profitable retail service department operation. Prefer connection with an organization where the "know how" of 18 years in this field can be exercised. References available. Box 1810, Air Conditioning & Refrigeration News.

MANUFACTURER or Distributor. Do you need man thoroughly versed in sales and distribution commercial refrigeration? College trained with practical experience as salesman, supervisor, and salesmanager; covering sales promotion, hiring, training, and direction of salesmen; also display and store equipment field. Permanent connection only with progressive organization. Box 1823, Air Conditioning & Refrigeration News.

ELECTRIC water coolers. 15 years successful experience rentals, sales, including bottle water business, beginning from straight canvassing to charge sales and general supervision, stationary and marine, which position now holding. Desire change where compensation commensurate results and efforts. New York area, Ebco products preferred, neither essential. Box 1826, Air Conditioning & Refrigeration News.

ATTENTION MANUFACTURERS: Two reliable, industrious refrigerating engineers with years of sales engineering experience desire to represent manufacturers of condensing units, coils, valves, etc. Large acquaintance jobbers, equipment manufacturers, distributors, and designers. Location of headquarters in Saint Louis, Missouri and serve area of 400 mile radius. Box 1830, Air Conditioning & Refrigeration News.

MAN, aged 35, with family, wishes connection with progressive firm engaged in air conditioning or refrigeration. Diversified experience including sales, service, and spare parts, also graduate of technical training school in this work. No particular location preferred. Will consider any offer that offers definite future. Box 1836, Air Conditioning & Refrigeration News.

SERVICE MAN, age 31, seven years experience in Industrial, Commercial, and Domestic refrigeration. Summer and winter air conditioning included. Desires position with a reliable organization where experiences can be exercised. Selling may be considered. Other information furnished on request. Box 1839, Air Conditioning & Refrigeration News.

AGE 39, seeking technical or sales position. Familiar machine shop and inspection, quality control, some research, experimental-development work, drafting room procedure. Experienced purchase and sales of equipment. Knowledge commercial refrigeration and air conditioning. Know controls and instrumentation. Member A. S. M., Associate A.S.R.E., Associate A.S.H.V.E. Box 1840, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

REFRIGERATION COUNTERMAN for one of Chicago's leading refrigeration supply jobbers. Excellent opportunity. Experience necessary. CHASE REFRIGERATION SUPPLY CO., 546-48 W. 119th St., Chicago 28, Ill.

REFRIGERATION ENGINEER for development, research, designing soda fountains and refrigerated equipment. Excellent position with good future. THE FISCHMAN CO., 10th & Allegheny Ave., Philadelphia 33, Pa.

DRAFTSMAN and engineer for heating, ventilation, and air conditioning. KROESCHELL ENGINEERING CO., 215 W. Ontario St., Chicago.

SAN DIEGO, California. Wright Refrigeration Service requires first class service men at $1.25 per hour with time and half over 40 hours per week. Steady work, lots of overtime, and the best climate in America. WRIGHT REFRIGERATION SERVICE, 1337 India St., San Diego, Calif.

APPLICATION ENGINEER: familiar with technical and practical applications of heat transfer equipment wanted by refrigeration and air conditioning manufacturer located in Michigan. Please advise background and qualifications. Box 1793, Air Conditioning & Refrigeration News.

COMMERCIAL application and service engineers. Large refrigeration firm with growing export business has openings in several territories for qualified refrigeration application and service engineers. Knowledge of foreign languages helpful. Write giving full details experience and references. Box 1797, Air Conditioning & Refrigeration News.

OHIO MANUFACTURER needs Assistant Sales Manager for nationally sold packaged refrigeration product. Excellent postwar volume assured. Position will require some travelling. No reconversion problem. Give full information first letter. Confidential. Box 1806, Air Conditioning & Refrigeration News.

SERVICE MEN—Chicago—$1.85 per hour plus $.25 per hour car allowance. Steady employment with large, long established refrigeration and air conditioning installation and service organization. Advancement opportunities in expansion program. Consideration given only to thoroughly experienced, competent men. Give full details in your letter. Box 1808, Air Conditioning & Refrigeration News.

LABORATORY test & project engineers. Openings for several refrigeration laboratory test and project engineers interested in permanent position with well established refrigerator manufacturer. Should have sufficient experience to carry a development or research project to completion. Mechanical or Electrical Engineering graduates preferred. Give education, experience, references. Box 1818, Air Conditioning & Refrigeration News.

DISTRICT MANAGERS. Well established Midwestern condensing unit manufacturer has openings East Coast and Middle West for district managers, salary and expense basis. In answering include photograph, complete experience data, and approximate income expected. Replies handled in strict confidence. Our organization knows of this advertisement. Box 1822, Air Conditioning & Refrigeration News.

WANTED: Sober, capable refrigeration service man, preferably married, interested in joining an established electrical contractor-dealer, in Juneau, capital of Alaska. Box 1828, Air Conditioning & Refrigeration News.

ENGINEER. Established Cincinnati, Ohio, company representing nationally known equipment manufacturer is in need of engineer with not less than five (5) years current experience in layout, design, and estimating air conditioning systems. Give full history of your experience, salary expected, and availability in letter. Confidential. Box 1829, Air Conditioning & Refrigeration News.

AIR CONDITIONING Engineer wanted for New York market; capable designer, cost estimator, high grade application engineer; thoroughly experienced, with record of successful installations, to head up engineering department old established organization. Excellent opportunity. Give experience, references, salary desired, first letter. Opening immediate and permanent. Write fully. Box 1834, Air Conditioning & Refrigeration News.

OPPORTUNITY AUSTRALIA. One of Australia's largest refrigeration manufacturers wants aggressive young American with sales executive experience to manage its commercial refrigeration and air conditioning sales to retailers. Real opportunity in a wonderful country. Box 1838, Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER. Established Commercial Refrigerator Manufacturing Company, Middle West, good postwar business. Able to calculate refrigeration loads, coil and compressor capacities, refrigerator designs, have some refrigeration service experience in field. State education, experience, age, marital status, references, previous employment if any, starting salary expected. Box 1841, Air Conditioning & Refrigeration News.

SALES SUPERVISOR. Preferably with experience selling commercial refrigerators. Must travel. Steady employment by an established Mid-Western manufacturing company. State previous experience, reference, age, and educational background. Box 1842, Air Conditioning & Refrigeration News.

FANCHISES WANTED

REPRESENTATIVE, well known in Twin Cities area, desires lines for Minnesota and western Wisconsin territory. Successful experience in refrigeration field. Good contacts. Replies confidential. Box 1833, Air Conditioning & Refrigeration News.

FRANCHISES AVAILABLE

DEALERS wanted along the eastern seaboard. Locker plant operators wanted. Don't miss this opportunity. Pinocchio Junior Freezer manufactured for us by Rafco. 6.2 cu. ft. OPA ceiling—$260. Less 50% to those selected. All delivery scheduled for December and January. COMPLETE REFRIGERATOR SALES CO., 92 Seventh Ave., New York 11.

EQUIPMENT WANTED

WE NEED Condensing units, both air-cooled and water-cooled. ¼ hp. and up. Standard makes preferred. Wire, write, or phone GENERAL REFRIGERATORS CORP., 678 Broadway, New York 12, N. Y. STuyvesant 9-1222.

EQUIPMENT FOR SALE

"CENTRAZ" VAPOR-SEAL. A waterproof adhesive that adheres to metal, wood, cement, plaster, etc. For lining frozen food and ice cream cabinets, milk and water coolers, walk-in boxes and all refrigeration applications requiring vapor control. Wall applications can be painted. CHRISTY CO., 1530 Olive St., St. Louis 3, Mo.

FOR SALE. Remanufactured air and water-cooled condensing units ¼ hp. up to 1½ hp. Frosted food and ice cream cabinets. EDISON COOLING CORP., 310 East 149th St., New York 51, N. Y.

ICE MAKERS: Six Victor seven-tray ice cube cabinets, new, copper coils; size 18 inches wide, 23 inches deep, 34 inches high, $100 each F.O.B. Trenton. EVER-READY REFRIGERATION CO., 219-23 N. Broad St., Trenton 8, N. J.

BEVERAGE COOLERS: 6 ft., capacity 22 cases; 8 ft., capacity 30 cases. These are dry coolers with heavy duty coils and one forced-air fan in 6 ft. model, two in 8 ft. model. Both have stainless steel doors and trim. Immediate delivery. GENERAL REFRIGERATORS CORP. 678 Broadway, New York 12, Stuyvesant 9-1222.

FREEZERS: Complete in every respect, ranging in capacity from 8 to 25 cu. ft. Excellently constructed, nicely finished, all with stainless steel tops and stainless steel doors. Large supply blower coils and freezer plates, all sizes. All equipment available for immediate delivery. Wire, write, phone GENERAL REFRIGERATORS CORP., 678 Broadway, New York 12, Stuyvesant 9-1222.

(Concluded on next page)

CLASSIFIED ADVERTISING

(Concluded from preceding page)

MANIFOLDS with valves—Manufactured by Mueller Brass Co. Forged brass type manifolds with 2-3-4-5 and 6 valves, ⅜ and ⅝ flare. Diaphragm or Bellows type, all brand new, sacrifice. Write to HYGRADE SODA FOUNTAIN MFG. CORP., 472 Sackman St., Brooklyn 12, N. Y.

FOR SALE: 2 Row Heating Coils to fit into all Standard Model 3 and 5 ton units; shipment in five days. ICE AIR CONDITIONING CO., INC., 252 West 26th St., New York 1, N. Y.

DRY BEVERAGE coolers, 6 ft., 8 ft., 10 ft. Farm freezers, all sizes. Water coolers, reach-ins, compressors. All brand new. No priority. Immediate delivery. Surplus blower coils, new, American. ₰O. C. 168. $135. 15° T.D., 23,000 B.T.U. JORDON REFRIGERATOR CO., 235 No. Broad St., Philadelphia 7, Pa., phone Rittenhouse 6359.

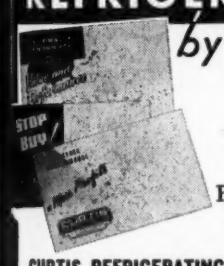
QUALITY dry beverage coolers, 75 inches long, 28 inches deep, 39 inches high, sliding doors. Freezers, stainless steel front, sides and top. Beer pumps, blowers, Stainless steel beer coolers, tavern work benches. Office and cafeteria water coolers. MAJESTIC REFRIGERATOR CORP., 625 Broadway, New York 12, N. Y.

HOME, FARM freezers. New. Limited supply available. All steel construction, finished in white Duco and stainless steel tops for use in Quick-Freeze and Storage. WILSON INDUSTRIES, 3533 Holland Ave., New York City 67. OL 5-6905.

WANTED

JUNIOR EXECUTIVE. Experienced in buying and selling home appliances, freezers, air conditioning units, etc., to handle purchasing, promotion and sales correspondence for large mid-west manufacturer whose sales run over 20 million per year. In reply give complete resume of experience and qualifications. Replies will be kept confidential. Box No. 1837, Air Conditioning & Refrigeration News.

REFRIGERATION by CURTIS



Write for complete information.

Bulletins C-14-M, C-58, C-68-C

CURTIS REFRIGERATING MACHINE DIVISION
of Curtis Manufacturing Company
1912 Kienlen Avenue • St. Louis 20, Mo.

LARGE REFRIGERATION CO.

Has openings for experienced refrigeration salesmen to work abroad. Knowledge of foreign languages helpful. Excellent money making possibilities. Write giving full details experience and references.

Box 1794 Air Conditioning & Refrigeration News

Will exchange quantity of International Harvester ½ h.p. and 1 h.p. condensing units for ¼ h.p. and ⅓ h.p. condensing units of any make.

Box 1831
Air Conditioning & Refrigeration News

MANHATTAN WHIPCORD F/HP V-BELTS

for satisfactory service

Important any time, but more so now, MANHATTAN Whipcord F/HP V-Belts keep home and store equipment running.

MORE POWER—grip the grooves, stop slips, uniform "pull."

LONGER LIFE—Endless cord construction resists internal heat and side wear.

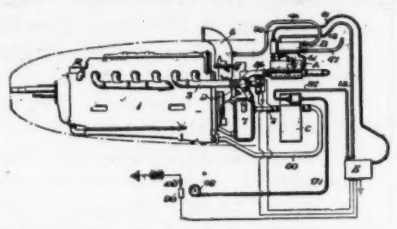
SILENT RUNNING—Smooth and noiseless on high-speed drives.

THE MANHATTAN RUBBER MFG. DIVISION
of Raybestos-Manhattan, Inc.
Executive Offices and Factories . . . Passaic, N. J.

Patents (Con't)

(Concluded from preceding page)

changer, condenser, and absorber forming a closed system containing the refrigerating medium, means for supplying hot exhaust gases of the internal combustion engine to the absorber to heat the same,

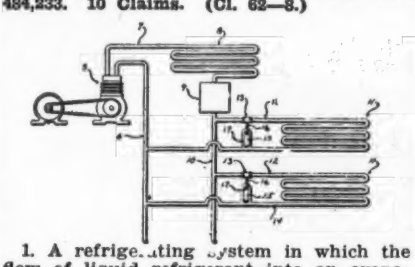


and means responsive to variations in the condition of the refrigerating medium within said system for controlling the supply of exhaust gases to said absorber, said condenser also including an air inlet and an air outlet, the latter connected to the carburetor air supply of said engine, whereby air is drawn through said condenser in heat exchange relationship with the refrigerating medium.

2,385,140. PROCESS OF FREEZING FOOD. Frank W. Knowles, Seattle, Wash., assignor to Beltice Corp., Seattle, Wash., a corporation of Washington. Application Oct. 23, 1939, Serial No. 300,766. 16 Claims. (Cl. 62—173.)

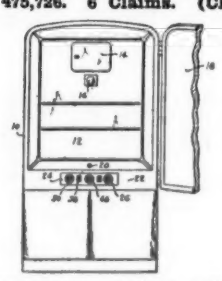
1. The process of freezing food, comprising; placing pieces of a food in a single layer, while maintaining the single layer, agitating the food so that each individual piece moves continuously and independently of the others, and while so agitating the food subjecting it to a temperature below the freezing point of the food.

2,385,243. REFRIGERATING SYSTEM. Irvin E. Wiegers, Overland, Mo., assignor to Milwaukee Gas Specialty Co., Milwaukee, Wis., a corporation of Wisconsin. Application April 23, 1943, Serial No. 484,233. 10 Claims. (Cl. 62—8.)



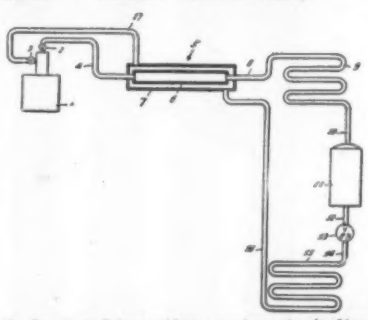
1. A refrigerating system in which the flow of liquid refrigerant into an evaporator is controlled by a thermostatic expansion valve having a temperature sensitive bulb for actuating the same, characterized by the fact that: the bulb is mounted in juxaposition to a branch of the suction line leading from the evaporator and connected with the suction line at spaced points and the inlet thereto extending abruptly upwardly from its juncture with the suction line so that the flow of liquid refrigerant which may be present in the suction line, through said branch is discouraged while gaseous refrigerant is free to pass through said branch.

2,385,525. REFRIGERATION APPARATUS. Graham S. McCloy, Springfield, Mass., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa., a corporation of Pennsylvania. Application Feb. 13, 1943, Serial No. 475,726. 6 Claims. (Cl. 62—4.)



1. The combination with a refrigerator having a food compartment, a lamp therein for illuminating said compartment, means for normally energizing said lamp when the door of said refrigerator is opened, a heat-exchange unit for said food compartment, refrigerating means for maintaining said unit at below freezing temperature, and means for periodically rendering said refrigerating apparatus inactive to allow defrosting of said unit, of means for preventing the energizing of said lamp when said door is opened while said refrigerating means is inactive, to indicate that said unit is being defrosted.

2,385,667. REFRIGERATING SYSTEM. Robert C. Webber, Indianapolis, Ind. Application Aug. 24, 1944, Serial No. 550,917. 5 Claims. (Cl. 62—115.)



1. In a refrigerating system including a compressor, a condenser, and an evaporator, conduit means for leading fluid from said compressor to said condenser, conduit means for leading fluid from said condenser to said evaporator, and conduit means for leading fluid from said evaporator to the intake of said compressor, said last-named conduit means being arranged in heat-exchanging relation to said first-named conduit means.

Former Ambassador Buys Merchandise Mart

CHICAGO—Interests representing Joseph P. Kennedy, former ambassador to Great Britain, recently purchased The Merchandise Mart, according to an announcement by Hughston M. McBain, president of Marshall Field & Co. The new owners are expected to take title and begin operating the property about Dec. 1.

The Merchandise Mart, completed in 1930, was built to furnish new quarters for the Marshall Field & Co. wholesale division, then located at Adams, Quincy, and Wells Sts. Space was also provided to house other wholesalers and manufacturers with the idea of making the Mart a great Midwestern marketing center.

Marshall Field & Co. will continue to lease space in the Mart for its corporate offices and for Chicago sales offices of its manufacturing division.

Buffalo Forge 3-Month Sales Hit $6 Million

BUFFALO — Total sales of the Buffalo Forge Co. during the three months to Aug. 31 amounted to $6,354,000, of which approximately $4,850,000 were war sales, according to a company report filed with the Securities & Exchange Commission.

The company's unfilled war contracts on Aug. 31 amounted to $8,405,000 compared with unfilled war contracts of $18,949,000 on June 1, the report showed.

G-E's 9-Month Orders Total $660,846,000

SCHENECTADY, N. Y. — Orders received by General Electric Co. during the first nine months of this year amounted to $660,846,000, compared with $1,094,199,000 in the same period last year, a decrease of 40%, President Charles E. Wilson announced recently.

Cancellations of orders booked during the current year to date totaled $362,029,000, of which $325,770,000 were recorded in the three months ended Sept. 30, principally as a result of the end of the war with Japan. The latter amount exceeded by $34,650,000 the new business booked during the third quarter.

"Our total cancellations and adjustments applying to orders booked in 1945 and prior years have amounted thus far to about $650,000,000," Mr. Wilson stated, "but we still have a backlog of about $500,000,000. Such a substantial backlog together with a relaxation of controls on the production of peacetime goods should enable us to keep employment at a high level for some time to come."

Davison Chemical Votes 25-Cent Dividend

BALTIMORE—The board of directors of the Davison Chemical Corp. have declared a quarterly dividend of 25 cents per share on its capital stock, payable Sept. 29, 1945, to stockholders of record at the close of business Sept. 8, 1945.

LA CROSSE *Manufacturers of* COMMERCIAL REFRIGERATION
COOLING EQUIPMENT
Look for the "LA CROSSE" emblem for Assurance of Quality and Performance.
Walk-In, Beer Dispensing and Beverage Coolers
BLUE RIBBON FARM MILK COOLERS
La Crosse Novelty Box Mfg. Co.
La Crosse, Wisconsin

Designers and Manufacturers of Thermostatic Expansion Valves; Pressure Regulating Valves; Solenoid Valves; Float Valves
ALCO VALVE COMPANY • ST. LOUIS, MO.

EXPORT TO EUROPE

Refrigeration salesman many years in industry with outstanding sales record seeks connection with large manufacturer for selling activity abroad. Familiar with European market.

Box 1832, Air Conditioning & Refrigeration News

Superior ECONOMIZERS

★ *Increase overall capacity.*

★ *Reduce running time up to 20%*

. . . prevent sweating and frosting of suction lines, as well as oil slugging, and bring "on-the-line" jobs within the normal cycle range.

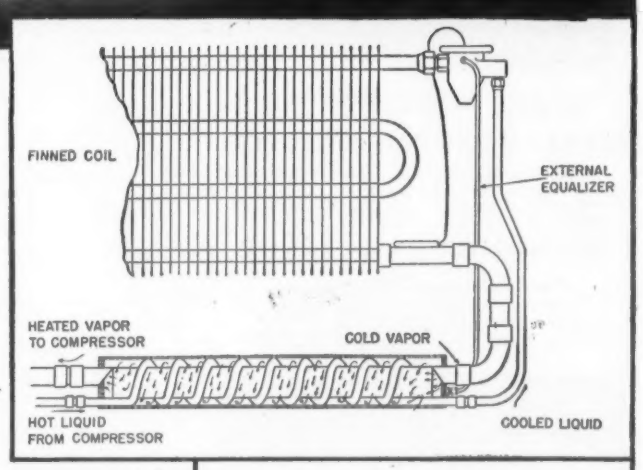
"Fractional Tonnage" ECONOMIZERS

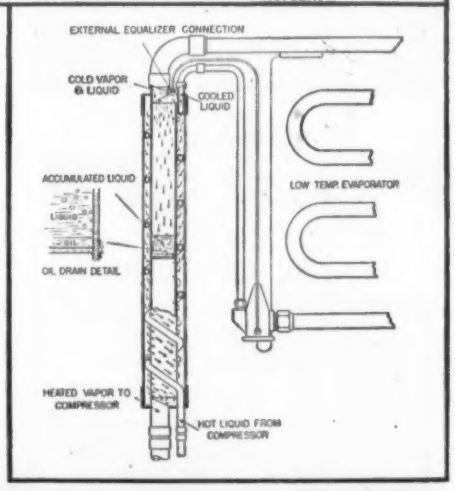
. . . are no longer considered "unnecessary gadgets." Data now available substantiates all claims for appreciable increase in overall capacity. One should be installed in each evaporator circuit of every commercial and industrial refrigerating system. Pressure drop is negligible . . . capacity per unit size is extremely high . . . all joints are silver soldered.

"Hy-K" ECONOMIZER-ACCUMULATORS

. . . have high ratio of prime to secondary, and liquid to vapor surface . . . Positive vapor contact with all surfaces . . . Maximum capacity per unit size.

"Hy-K" Economizer-Accumulators are equally suited for use in high, medium or low temperature systems.





If you haven't a copy of the new Superior Catalog R-2, request one today. No. 129

SUPERIOR VALVE & FITTINGS COMPANY
PITTSBURGH 26, PENNSYLVANIA
OFFICES IN PRINCIPAL CITIES • STOCKS: CHICAGO (6) • LOS ANGELES (15) • JOBBERS EVERYWHERE

In New Post

D. C. McCOY

* * *

McCoy Heads Freezer Sales for Frigidaire

DAYTON, Ohio—D. C. McCoy has been appointed to handle home freezer sales for Frigidaire Division, General Motors Corp., announces H. M. Kelley, appliance sales manager.

Mr. McCoy has been associated with Frigidaire for 20 years during which time he has served as sales engineer, specializing in ice cream cabinet sales; zone manager, covering both appliance and commercial sales, and manager of the commercial section of Frigidaire's product development and application department.

He is considered by many to be one of the foremost authorities on frozen foods, said Mr. Kelley.

St. Louis Firms--

(Concluded from Page 1, Column 3)

them intensively as refrigeration mechanics.

One such contractor reports that he put his new employes "through the mill" in three weeks and now believes he is "really a little better off" than previously.

Some of the contractors, however, have signed new contracts with the union, granting them their demands. Others, it is reported, are still sitting tight with their operations at a standstill.

Before the strike, wage rates for union refrigeration men in St. Louis called for $1 an hour for domestic repair work, $1.25 an hour for commercial servicing, and $1.62½ an hour for installation jobs.

WLB Rules--

(Concluded from Page 1, Column 3)

regional boards were in agreement, as in this case.

Wage provisions of last year's contract, which have been ordered to continue, are as follows:

"The rate of wages for a journeyman refrigeration worker shall not be less than $1.15 per hour during regular working hours on service work. On installation work, the journeyman's rate of wages shall not be less than $1.15 per hour where motors driving the compressor do not exceed a total of 5 hp., multiple or single.

"On installation work where the motors driving the compressors exceed the above-named horsepower limit, the rate of pay for journeyman refrigeration workers shall not be less than $1.72½ per hour."

A detailed story giving the history of the dispute between the eight members of the Refrigeration & Air Conditioning Contractors Association of Cincinnati who employ union labor and the local steamfitters union (AFL) appeared in the July 30 issue of AIR CONDITIONING & REFRIGERATION NEWS.

Before the expiration of the 1944 contract the union asked contractors to sign a new agreement which would have given all refrigeration repairmen the steam fitters rate of $1.72½.

In January of this year the union informed contractors that all the refrigeration service men in the union had been upgraded to steam fitters.

The dispute was turned over to WLB last March after the union called a strike of its members.

MEETINGS FOR THE INDUSTRY

Oct. 1-31: Postwar appliance shows sponsored by the Electrical Association of Chicago. Commonwealth Edison Bldg., Chicago.

Oct. 23, Tues: Electrical Institute of Washington will discuss merchandising, pricing, financing of appliances. The Statler, Washington, D. C.

Nov. 1-3, Thurs-Sat: 10th annual conferenee of International Association of Electrical Leagues. The Morrison, Chicago.

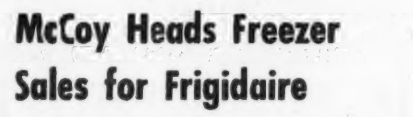
Nov. 4, Sun: New England States Association RSES. The Sheraton, Springfield, Mass.

Nov. 7-9, Wed-Fri: Fall REMA meeting, members only. The Homestead, Hot Springs, Va.

Nov. 13-16, Tues-Fri: 28th annual meeting of the National Association of Ice Industries. The Sherman, Chicago.

Nov. 15-16, Thurs-Fri: First postwar models on display at Youngstown Kitchen distributors' meeting at the headquarters plant, Warren, Ohio.

Dec. 10-12, Mon-Wed: 41st annual meeting of ASRE. Four technical sessions, others. The Pennsylvania, New York City.

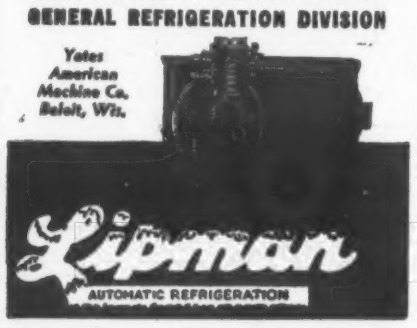


WAR INDUSTRIES NEED REFRIGERATION

The use of refrigeration in industry has been greatly accelerated by the war. In peacetime this expansion may logically be expected to continue. Write for literature.

GENERAL REFRIGERATION DIVISION

Yates American Machine Co. Beloit, Wis.



Cafeteria Type WATER COOLERS

FOR MESS HALLS HOSPITALS AND PLANTS

PACKAGED Remote and Cabinet Models All Sizes

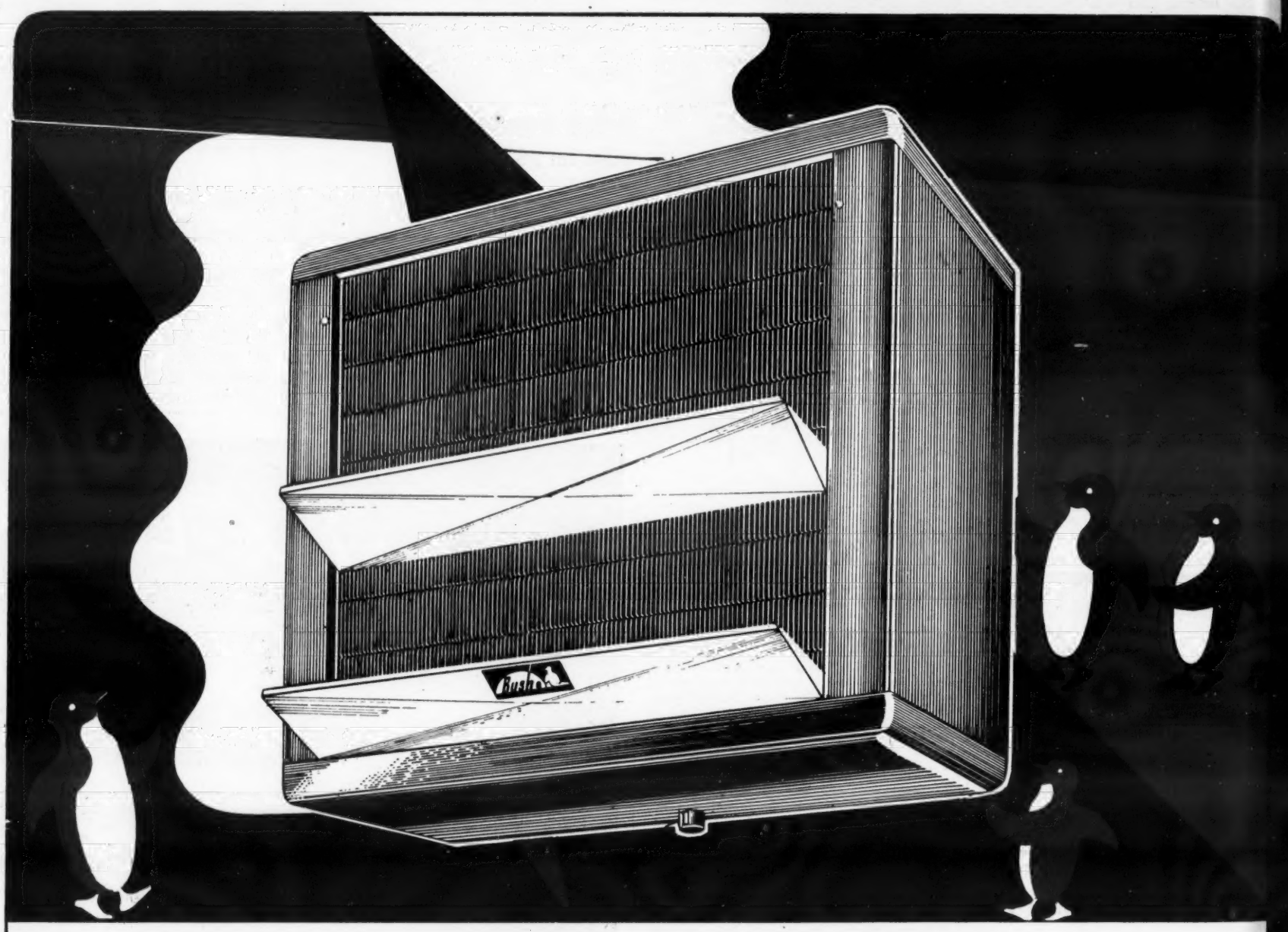
For all applications Write for Details

Quick Shipments

FILTRINE MANUFACTURING CO.

53 Lexington Ave. Brooklyn 3, N. Y.

For Over Filtrine HIGH EFFICIENCY 48 Years



Bush STANDARD UNIT COOLERS

Bush Standard Unit Coolers are designed to meet the rigid requirements of industrial and commercial cooling applications. New models are beautifully streamlined with casings of corrosion resistant steel finished in baked gray enamel. Heat exchangers specially engineered for each model.

There's a size for every application. Capacities from 2500 to 18000 BTU. at 10° T.D. Compact, sturdy and low in price. Bush Standard Unit Coolers are unexcelled for dependable performance. Motor support and mounting channels simplfying installation and servicing.

Bush Standard Unit Coolers have been designed with an unusual margin of safety in coil surface. Can be operated at temperatures and air speeds ideal for this type of unit. Slow speed motors and overlapping kidney type fan blades assure quiet operation and minimum bearing wear. Equipped with adjustable louvres.

Bush Standard Unit Coolers, specially built for use with ammonia refrigerant, also are available. Write for new illustrated Catalog which describes the Standard Unit Cooler . . . and other Bush Heat Transfer Products. For advanced engineering . . . Buy Bush.

Heat Transfer Products by BUSH

HARTFORD, CONNECTICUT 415 LEXINGTON AVENUE, NEW YORK ★ 549 W WASHINGTON BOULEVARD, CHICAGO
EXPORT ADDRESS 13 EAST 40TH STREET, NEW YORK ★ CABLE "ARLAB"